APPENDICES

Ambient Air Monitoring for Chloropicrin and Breakdown Products of Metam Sodium in Monterey and Santa Cruz Counties – Fall 2001

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Protocol for the Ambient Air Monitoring
For Methyl Bromide, 1,3-Dichloropropene, Chloropicrin and
Breakdown Products of Metam Sodium
In Kern, Monterey and Santa Cruz Counties
During Summary/Fall, 2001

State of California California Environmental Protection Agency AIR RESOURCES BOARD

Protocol for the Ambient Air Monitoring for Methyl Bromide, 1,3-Dichloropropene, Chloropicrin and Breakdown Products of Metam Sodium In Kern, Monterey and Santa Cruz Counties During Summer/Fall, 2001

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This protocol has been reviewed by the staff of the California Air Resources Board and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Air Resources Board, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

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Protocol for the Ambient Air Monitoring for Methyl Bromide, 1,3-Dichloropropene, Chloropicrin and Breakdown Products of Metam Sodium In Kern, Monterey and Santa Cruz Counties During Summer/Fall, 2001

I. Introduction

At the request of the California Department of Pesticide Regulation (DPR) (June 28, 2000 Memorandum, Helliker to Lloyd), the Air Resources Board (ARB) staff will conduct ambient air monitoring for the pesticides methyl bromide, 1,3-dichloropropene (Telone), chloropicrin and two breakdown products of metam sodium (methyl isothiocyanate and methyl isocyanate). Monitoring will occur in Kern County over an eight week ambient monitoring period, tentatively scheduled from June 30, 2001 to August 30, 2001 and also in Monterey and Santa Cruz Counties over an eight week ambient monitoring period, tentatively scheduled from September 10, 2001 to November 8, 2001. This is the second consecutive year the DPR has requested monitoring for methyl bromide and 1,3-dichloropropene at these locations. This monitoring will be done to fulfill the requirements of AB 1807/3219 (Food and Agricultural Code, Division 7, Chapter 3, Article 1.5) which requires the ARB "to document the level of airborne emissions...of pesticides which may be determined to pose a present or potential hazard..." when requested by the DPR. Monitoring is being conducted to coincide with the primary use of these fumigants prior to planting carrots in Kern County and prior to planting strawberries in Monterey and Santa Cruz Counties.

The sampling and analysis will follow the procedures outlined in this protocol as well as the quality assurance guidelines described in the "Quality Assurance Plan for Pesticide Air Monitoring" (May 11, 1999 version)(Attachment I).

The draft method, "Standard Operating Procedures for the Sampling and Analysis of Bromomethane and Telone by GC/MS using a Varian Cryogenic Sampler and Silco™ Canisters," is included as Attachment II (May 2001 Version). This method will be used as the primary analysis method for methyl bromide (bromomethane) and 1,3-dichloropropene. Samples with concentrations above the calibration range of the primary method will be analyzed on a secondary method, "Standard Operating Procedure Sampling and Analysis of Bromomethane In Silco Canisters", included as Attachment III.

The draft ARB method, "Standard Operating Procedure, Sampling and Analysis of 1,3-dichloropropene (Telone) and Methyl Isothiocyanate (MITC) in Application and Ambient Air using Gas Chromatography/Mass Selective Detector (06/25/01 Version)," is enclosed as Attachment IV.

The draft ARB method, "Standard Operating Procedure, Sampling and Analysis of

Methyl Isocyanate in Application and Ambient Air using High Performance Liquid Chromatography with a Fluorescence Detector (06/25/01 Version)," is enclosed as Attachment V.

The draft ARB method, "Standard Operating Procedure, Sampling and Analysis of Trichloronitromethane (Chloropicrin) in Application and Ambient Air using Gas Chromatography/Mass Selective Detector (06/25/01 Version)," is enclosed as Attachment VI.

II. Sampling

The collection media used for monitoring of methyl bromide and 1,3-dichloropropene will involve Silcosteel® canister sampling. The media used for chloropicrin will be XAD-4 sampling cartridges. The media used for methyl isocyanate (MIC) will be XAD-7 sampling cartridges. The media used for methyl isothiocyanate (MITC) will be charcoal sampling cartridges (1,3-dichloropropene results from the charcoal samples will also be reported). Individual samples will be collected for 24-hour periods. For pesticide ambient monitoring conducted in 2000, 24-hour samples were collected four days per week, Monday through Friday. However, for the 2001 monitoring the DPR has requested that: "At each site, 4 samples per week should be collected randomly over the full seven-day week during the sampling period". To accommodate this request the sampling schedule will be arranged, generally in groups of four consecutive sampling periods separated by one, two or three off-days, to add sampling days during most of the weekends during the eight week monitoring studies.

Caution should be used during field monitoring, transportation, storage, and lab analysis to minimize exposure of samples to sunlight in order to prevent photo degradation of chloropicrin, MIC and MITC.

Chloropicrin, MIC and MITC Sampling:

The sampling methods for three of the compounds require passing measured quantities of ambient air through adsorbent sampling tubes. For chloropicrin, the tubes are 8 mm x 150 mm, XAD-4, with 400 mg in the primary section, and 200 mg in the secondary section (SKC special order). For MIC, the tubes are 6 mm x 90 mm, XAD-7, 1-(2-pyridyl)piperazine coated, with 80 mg in the primary section, and 40 mg in the secondary section (Supelco special order). Two tubes will be used in sequence for the MIC sampling. For MITC, the tubes are 8 mm x 110 mm, coconut shell charcoal with 400 mg in the primary section, and 200 mg in the secondary section (SKC catalogue #226-09). (The coconut base charcoal tube samples will also be analyzed for 1,3-dichloropropene to be compared with the canister results).

Sample collection for chloropicrin is at a flow rate of 90 standard cubic centimeters per

minute (sccpm); at 75 sccpm for MIC; and at 2.5 standard liters per minute (slpm) for MITC. All samples are 24 hours in duration. Subsequent to sampling, the tubes are capped, labeled, placed in a culture tube and stored and transported to the ARB laboratory in Sacramento in an insulated container with dry ice. The DPR recommended target 24-hour estimated quantitation limits (EQLs) were 0.1 ug/m³, 0.05 ug/m³ and 0.5 ug/m³ for chloropicrin, MIC, and MITC, respectively. The ARB 24-hour EQLs are 0.15 ug/m³, 0.42 ug/m³ and 0.18 ug/m³ for chloropicrin, MIC, and MITC, respectively. The MIC EQL is approximately 8 times higher than requested. The DPR directed that the monitoring for MIC should be conducted as planned even with the higher than requested quantitation limit.

Each sample train consists of an adsorbent tube, Teflon fittings and tubing, rain/sun shield, rotameter, train support and a 115 volt AC vacuum pump (Figure 1). Tubes are prepared for use by breaking off the sealed glass end and immediately inserting the tube into the Teflon fitting. The tubes are oriented in the sample train according to a small arrow printed on the side indicating the direction of flow. A 0-5 lpm rotameter is used to control sample flow for the MITC sampling and 0-240 ccpm rotameters will be used to control the flow for the chloropicrin and MIC sampling. The flow rates will be set using a calibrated digital mass flow meter (MFM) before the start of each sampling period. A MFM scaled from 0-5 slpm is used for MITC and a 0-100 sccpm MFM is used for the chloropicrin and MIC samplers. The flow rate is also checked and recorded, using the MFM, at the end of each sampling period. Samplers will be leak checked prior to each sampling period with the sampling tubes installed. Any change in flow rates will be recorded in the field logbook. The pesticide ambient sampling procedures for adsorbent tubes are attached as Attachment VIII. The adsorbent tube sampling field log sheet is enclosed as Attachment X.

Methyl Bromide (MeBr) and 1,3-Dichloropropene Sampling

Integrated ambient air samples will be collected using passive air sampling into evacuated six liter, Silcosteel® canisters (from Restec Corporation). The flow rate of 3 sccpm will be set using a battery operated mass flow meter. The sampling system will be operated continuously for 24 hours with the exact operating interval recorded on the log and field data sheets (see Attachment IX). The canister vacuum reading will be recorded at the start and end of each sampling period using the –30 to 0 inHg gauge on the passive sampler. The start and end canister vacuum readings will be approximately -30 inHg and -8 inHg, respectively. The canister vacuum reading will also be measured using a more accurate gauge in the lab before and after transport to/from the field. The laboratory gauge readings will be used to calculate the sample volume collected. The 3 sccpm sampling rate will yield a sample volume of 4.32 liters over the 24 hour sampling period. The EQL for MeBr is 0.036 ug/m³ (target EQL was 0.4 ug/m³) and the EQLs for cis and trans 1,3-dichloropropene are 0.015 and 0.03 ug/m³, respectively (target EQL for Telone was 0.01 ug/m³).

The critical orifice flow controllers (Silcosteel treated Veriflo SC423XL) will be attached to the valve fitting on the canister using a Silcosteel treated swagelock connector (Figure 2). A six foot section of 1/8 inch O.D, Silcosteel tubing will be attached to the inlet end of an in-line, 7 micron filter, which will be attached to the inlet end of the flow controller. The inlet end of the tubing will be bent into a U shape (to prevent rain from entering) and supported about six feet above the building roof tops for the ambient monitoring. At the end of each sampling period, the canisters will be placed in shipping containers, with a sample identification/chain of custody sheet, and will be shipped as soon as reasonably possible to the ARB Monitoring and Laboratory Division laboratory for analysis. The samples will be stored at ambient laboratory temperature prior to analysis.

When using a critical orifice flow restrictor for passive integrated sampling, the potential decrease in flow rate as the vacuum in the canister changes must be taken into account. This condition is resolved by using the Veriflo SC423XL flow controller. The controller uses a metal diaphram downstream of the critical orifice to regulate the flow as the pressure the canister changes. It is capable of maintaining a continuous low flow with vacuum ranges from -29.9 to approximately -5 inHg. The in-line filter prevents particles from entering the critical orifice of the flow controller, which could clog the critical orifice and affect the flow through the controller. The outside temperature can also affect the flow rate. For example, there could be an approximately six percent flow drop when the temperature changes from 80 °F to 125 °F (according to manufacturer's specifications).

The pesticide ambient sampling procedures for canisters are enclosed as Attachment VII. The canister sampling field log sheet and canister data sheet are enclosed as Attachment IX. These forms will be used to record start and stop times, start and stop vacuum readings, sample identifications, weather conditions, sampler's initials and any other significant data.

Ambient Monitoring

The DPR has directed that monitoring site selection in Kern County should focus on 1,3-dichloropropene and metam sodium, but that samples be collected and analyzed for all five compounds. The historical use patterns for 1,3-dichloropropene and metam sodium suggest that monitoring should occur over a two-month period during July and August in Kern County. As was done in 2000, five sampling sites will be selected in relatively high-population areas or in areas frequented by people. At each site, a target of 32 discrete 24-hour sampling periods will be monitored during the study. Collocated (field duplicate) samples will be collected for 1 day/week at each sampling location.

The DPR has directed that monitoring site selection in <u>Monterey and Santa Cruz</u> <u>Counties</u> should focus on methyl bromide and chloropicrin, but that samples be collected and analyzed for all five compounds. In Monterey and Santa Cruz Counties,

historical use patterns indicate that monitoring for methyl bromide and chloropicrin should take place during September and October. As was done in 2000, five sampling sites will be selected in relatively high-population areas or in areas frequented by people (e.g., schools or school district offices, fire stations or other public buildings). Also, samples will again be collected in an urban area in Salinas. At each site, a target of 32 discrete 24-hour samples will be taken during the sampling period. Collocated (duplicate) samples will be collected for eight dates at each sampling location. Samples will also be collected for a one-week period in an area which is distant to fumigant applications. The location of this 'background' sampling site will be determined after consultation with the County Agricultural Commissioner's offices.

The sites were selected by ARB personnel from the areas of Kern County where carrot (and roses for one site) farming is predominant and from areas of Monterey and Santa Cruz Counties where strawberry farming is predominant. Sites were selected for their proximity to the fields and the presence of residents or students, with considerations for both accessibility and security of the sampling equipment. The sites are near areas of historical use of methyl bromide, 1,3-dichloropropene, chloropicrin and metam sodium. ARB understands that DPR staff will verify and quantify the actual use of these fumigants that takes place during the study when the information becomes available.

III. Analysis

The draft method, "Standard Operating Procedures for the Sampling and Analysis of Bromomethane and Telone by GC/MS using a Varian Cryogenic Sampler and Silco™ Canisters," is included as Attachment II (May 2001 Version). This method will be used as the primary analysis method for methyl bromide (bromomethane) and 1,3-dichloropropene. Samples with concentrations above the calibration range of the primary method will be analyzed on a secondary method, "Standard Operating Procedure Sampling and Analysis of Bromomethane In Silco Canisters" (Attachment III), using a higher calibration range. The procedures are based on EPA Method TO-15 and consist of cryogenic pre-concentration of an aliquot of the whole air sample followed by GC/MS analysis. The canisters arrive from the field at sub-ambient pressure and are pressurized (diluted) in the laboratory before analysis. The analyses will be performed by the ARB laboratory in Sacramento.

The ARB method, "Standard Operating Procedure, Sampling and Analysis of 1,3-dichloropropene (Telone) and Methyl Isothiocyanate (MITC) in Application and Ambient Air using Gas Chromatography/Mass Selective Detector (06/25/00 Version)," is enclosed as Attachment IV. The exposed charcoal tubes are stored in an ice chest or refrigerator until desorbed with 3 ml of dichloromethane. The attached SOP specifies that a gas chromatograph with a mass selective detector is used for analysis. The analyses will be performed by the ARB laboratory in Sacramento.

The draft ARB method, "Standard Operating Procedure, Sampling and Analysis of Methyl Isocyanate in Application and Ambient Air using High Performance Liquid Chromatography with a Fluorescence Detector (06/25/01 Version)," is enclosed as Attachment V. As outlined in the SOP, the sampling efficiency/recovery is low using this method, ranging from 50% to 70% at low levels. The sampling stability study will be run concurrently with analyses of samples. The analyses will be performed by the ARB laboratory in Sacramento.

The draft ARB method, "Standard Operating Procedure, Sampling and Analysis of Trichloronitromethane (Chloropicrin) in Application and Ambient Air using Gas Chromatography/Mass Selective Detector (06/25/01 Version)," is enclosed as Attachment VI. The analyses will be performed by the ARB laboratory in Sacramento.

IV. Quality Assurance

Field Quality Control for the ambient monitoring will include the following for each of the sampling methods (and for each of the sampling regions).

1) Field Spikes: For the 2000 ambient monitoring, field spikes were prepared (spiked) at approximately 0.6 ug/m³ for both methyl bromide and 1,3-dichloropropene. The 2000 field spikes were collocated with samples collected at the urban sampling sites of Bakersfield and Salinas for the two respective studies. However, the pesticide levels observed in the collocated ambient samples were significantly higher than the spike levels, causing poor results in the recovery calculation. For 2001, the field spikes will be prepared (spiked) at levels of approximately 10 ug/m³ each for methyl bromide and cis and trans 1,3-dichloropropene in the canister samples.

The spike levels for MIC, MITC and chloropicrin in the adsorbent tube samples have not yet been determined.

The four field spikes will be obtained by sampling ambient air at the urban background monitoring site for 24 hour periods (i.e., collocated with a background sample at the same environmental and experimental conditions). The four field spikes will be collected over the eight-week monitoring period. For example, one each of the field spikes will be collected every other week.

For the 2001 Monterey/Santa Cruz Counties study, a field spike sample will also be collected at a site (to-be-determined) distant to methyl bromide applications. Levels of methyl bromide at this 'background' site are expected to be lower than in Salinas.

- Four trip spikes will be prepared at the same level as the field spikes. A trip spike will be transported and analyzed along with each of the field spikes.
- 3) Four lab spikes will be prepared at the same level as the field and trip spikes. A lab spike will be analyzed along with each of the field and trip spike sets.
- 4) Collocated samples will be taken for eight dates at each sampling location.
- 5) A trip blank will be obtained each week of sampling.

V. Personnel

ARB sampling personnel will consist of staff from the ARB Air Quality Surveillance Branch. Laboratory personnel will consist of staff from the ARB Northern Laboratory Branch.

FIGURE 1. SAMPLE TREE

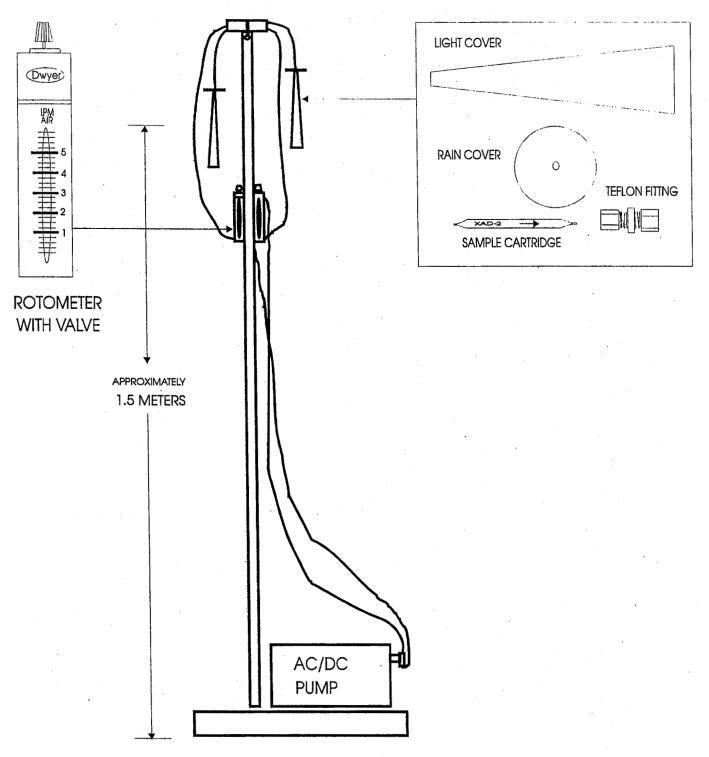
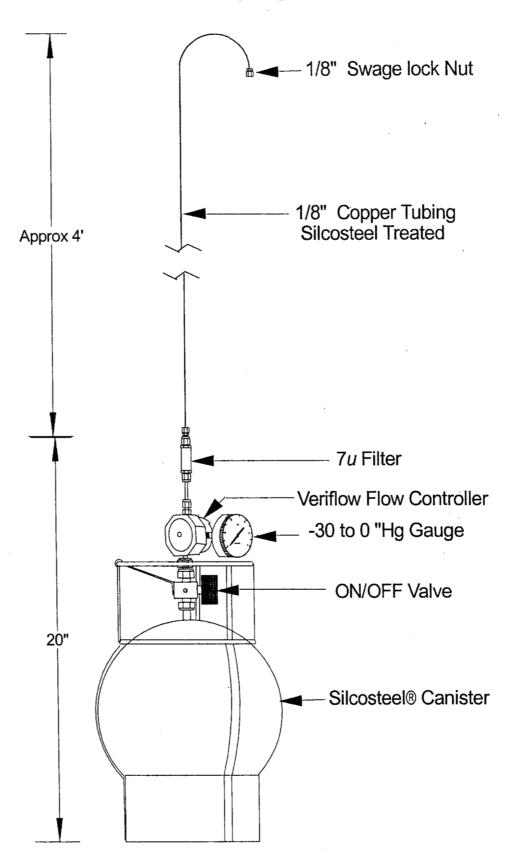


Figure 2
Passive Canister Sampling Train



APPENDIX II

Laboratory Report for Air Sampling Cartridge Method Development and Analytical Results for Ambient Monitoring in Monterey and Santa Cruz Counties

California Environmental Protection Agency

Air Resources Board

Air Sampling Cartridge Method Development and Analytical Results for Ambient Monitoring in Monterey and Santa Cruz Counties

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This report has been reviewed by staff of the California Air Resources Board and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Air Resources Board, nor does mention of trade names of commercial products constitute endorsement or recommendation for use.

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1.0 INTRODUCTION

The Department of Pesticide Regulation (DPR) requested the Air Resources Board (ARB) to conduct ambient air monitoring for Telone (1,3-dichloropropene), chloropicrin (trichloronitromethane), and the breakdown products of metam-sodium, methyl isothiocyanate (MITC) and methyl isocyanate (MIC). 1,3-Dichloropropene (DCP) is present as a mixture of the cis and trans isomer. This report covers the method development, analytical, and quality assurance results for the: charcoal cartridge analysis of both cis and trans isomers of DCP and MITC; XAD-4 cartridge analysis of trichloronitromethane (TCNM); and derivatized XAD-7 cartridge analysis of MIC. DPR's requested estimated quantiation limits (EQL) are: DCP, 0.01 micrograms per cubic meter (μ g/m³); MITC, 0.5 μ g/m³; TCNM, 0.1 μ g/m³; and MIC, 0.05 μ g/m³.

DPR's request for the ambient air analysis of several fumigant pesticides concurrently necessitates methodology that would optimize sample analysis with minimizing field sampling requirements. For the 2001 monitoring, staff maximized the analytical methods in two ways. One, the method was developed to include the most analytes while minimizing procedural variation. Two, by minimizing the number of cartridges required by the field sampling team.

2.0 METHOD DEVELOPMENT AND STANDARD OPERATING PROCEDURE.

2.1 Overview

Staff modified the DCP method from the year 2000. The 2001 pesticide analysis uses a column that optimizes chromatographic separation of the cis and trans-DCP isomers, MITC, and TCNM. The DCP, MITC, and TCNM extraction used 3 milliliters (ml) of dichloromethane (DCM). The instrument analysis was on a gas chromatograph/mass selective detector (GC/MSD) operating in the selected ion monitoring (SIM) mode. MIC collection was on derivatized XAD-7 and extraction with 3ml of acetonitrile (ACN). MIC instrumental analysis was on a high performance liquid chromatograph (HPLC) with a fluorescence detector.

2.2 Instrument Reproducibility

Instrumental reproducibility on the GC/MS used seven individual injections of 1 μ l each of the DCP, MITC and TCNM at three concentrations. Table 1A shows the results and area responses for DCP and MITC with the average and standard deviation of the determined value at 10, 40, and 100 nanograms/ml (ng/ml) for DCP and 0.5, 2.0 and 10.0 μ g/ml for MITC. Table 1B shows the results and area responses for TCNM and MIC with the average and standard deviation of the determined values at 5, 20, and 50 ng/ml and 0.013, 0.078, and 0.260 μ g/ml, respectively.

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2.3 Calibration

The DCP analysis used standard concentrations of 10, 20, 40, 60, 100, and 200 ng/ml for a 6-point calibration. The MITC analysis uses standard concentrations of 0.5, 1.0, 2.0, 3.0, 5.0, and 10.0 μ g/ml. For TCNM the calibration concentration are 5, 10, 20, 30, 50, and 100 ng/ml. For the HPLC analysis of MIC, the calibration concentrations were 0.013, 0.026, 0.052, 0.078, 0.130, and 0.260 μ g/ml. A calibration run was made before each analytical sample batch. All the calibration curves are linear with a correlation coefficient (r^2) of 0.995 or greater.

2.4. Minimum Detection Limit (MDL) and Estimated Quantitation Limits (EQL)

The EQL requested for DCP is $10.0~\text{ng/m}^3$, which corresponds to 12.0~ng/ml when using a 3 ml extract and a flow rate of 2.5~liters per minute (LPM). Analytically an EQL of 10.0~ng/ml (5 ng/ml per isomer) was achieved. This corresponds to 15.0~ng/sample. For MITC, the requested EQL is $0.5~\mu\text{g/m}^3$ or $1.5~\mu\text{g/sample}$ using a 3 ml extract. The low standard concentration was set at $0.5~\mu\text{g/ml}$, which achieves the requested EQL. For TCNM, the requested EQL is $100~\text{ng/m}^3$. Analytically the EQL that was achieved was $137.5~\text{ng/m}^3$, which corresponds to 19.8~ng/sample when using a 3 ml extraction volume and a flow rate of 0.1~LPM. The requested EQL for MIC is $0.05~\mu\text{g/m}^3$. Analytically the EQL achieved was $0.42~\mu\text{g/m}^3$, which corresponds to $0.045~\mu\text{g/sample}$ when using a 3 ml extraction volume and a flow rate of 0.075~LPM.

Staff report results above the EQL to three (3) significant figures; results below the EQL but greater than or equal to the MDL, are reported as detected (DET); results less than MDL are reported as <MDL.

2.5. Collection and Extraction Efficiency (Recovery)

The extraction recovery for DCP, based on historical data, ranged from 82 to 110% with a mean of 92% and a standard deviation of 12%. The recovery of MITC ranges from 61 to 68%. The recovery for TCNM from the XAD-4 cartridges averaged 85%. The data on MIC showed a recovery of approximately 69%. The table below presents the results.

Compound Spikes	Mean Percent (%) Recovery	Percent (%) Std Dev
DCP	92	12
MITC	64	• 4
TCNM	85	10
MIC	69	14

2.6. Storage Stability

Staff completed storage stability studies on TCNM only. XAD-4 was spiked at 15 and 150 ng per cartridge based on a 3 ml extract. They were stored in the freezer, with one set analyzed weekly for up to 4 weeks. Results are shown below. Storage stability studies were previously done with DCP and MITC and not repeated here. MIC storage studies were not done prior to the start of the monitoring.

Days Stored	XAD Blank	Low #1	Low #2	Low #3	High #1	High #2	High #3
0	· <mdl< th=""><th>4.91</th><th>5.43</th><th>5.20</th><th>43.12</th><th>43.62</th><th>43.31</th></mdl<>	4.91	5.43	5.20	43.12	43.62	43.31
9	<mdl< th=""><th>6.20</th><th>6.06</th><th>5.94</th><th>43.12</th><th>49.34</th><th>43.65</th></mdl<>	6.20	6.06	5.94	43.12	49.34	43.65
14	<mdl< th=""><th>6.71</th><th>6.50</th><th>6.14</th><th>54.38</th><th>52.40</th><th>54.07</th></mdl<>	6.71	6.50	6.14	54.38	52.40	54.07
20	<mdl< th=""><th>5.18</th><th>6.01</th><th>4.57</th><th>40.72</th><th>41.97</th><th>39.12</th></mdl<>	5.18	6.01	4.57	40.72	41.97	39.12
28	<mdl< th=""><th>5.42</th><th>4.26</th><th>4.07</th><th>43.19</th><th>42.66</th><th>42.11</th></mdl<>	5.42	4.26	4.07	43.19	42.66	42.11
Average		5.68	5.65	5.18	44.91	46.00	44.45
Std dev		0.75	0.87	0.88	5.40	4.61	5.66
Percent Recovery		113.7	113.0	103.7	89.81	92.00	88.90

2.7. Breakthrough

Staff completed breakthrough studies for TCNM. Results are shown below. Two to four XAD-4 cartridges were spiked at 1500 ng and placed on field samplers for 24 hours at different flow rates. The front and back beds were analyzed as described in the method. Flow rate is a critical factor in the field sampling for TCNM. The flow rate for field sampling is set at 0.1 LPM based on the breakthrough results.

Flow Rate	Amount Front Bed	% Recovery	Amount Back Bed	% Recovery
1.0 LPM Average Std Dev	186.8 19.1	37.4 3.8	81.8 12.0	16.4 2.4
0.5 LPM Average Std Dev	111.8 8.5	22.4 1.7	89.9 4.6	18.0 0.9
0.2 LPM Average Std Dev	362.6 9.4	72.5 1.9	36.9 6.6	7.4 1.3
0.1 LPM Average Std Dev	408.4 18.9	81.7 3.8	<mdl< td=""><td>NA</td></mdl<>	NA

000018

Work on MIC to optimize field sampling and minimize interference from the derivatizing agent indicates that two cartridges placed in tandem were needed to retain MIC. No further work was completed on MIC before the start of monitoring.

3.0 AMBIENT AIR MONITORING SAMPLE RESULTS

Extraction and analysis of all samples was complete within 7 days of receipt.

The laboratory received a total of 256 charcoal cartridges for the analysis of DCP and MITC including four (4) field spikes, four (4) trip spikes, and eight (8) trip blanks from 09/08/01 to 11/07/01. Table 2 presents the results of the analysis of the cis and trans-DCP and the MITC ambient air samples by site. For TCNM the laboratory received a total of 256 XAD-4 ambient air samples including four (4) field spikes, four (4) trip spikes, and eight (8) trip blanks from 09/08/01 to 11/07/01. Table 3 presents the TCNM results by site. For MIC the laboratory received a total of 287 derivatized XAD-7 ambient air samples including four (4) field spikes, four (4) trip spikes, and eight (8) trip blanks from 09/08/01 to 11/07/01. Table 4 presents the MIC results by site. For the first 65 samples received, a separate log number was assigned to the front and the back cartridge. From log number 66 forward, the front and back samples were given the same log number.

4.0 ANALYTICAL QUALITY CONTROL SAMPLES

4.1 Laboratory solvent blanks

Staff analyzes a laboratory solvent blank, DCM or ACN, with each of the ambient analytical sample batches. This is to insure there are no reagent interferences in the analysis. An analytical batch in an automated GC/MS or HPLC analysis sequence is comprised of the samples received in a given week. All blanks were less than the MDL.

4.2 Laboratory spiking solutions

A spiking solution of the target compounds is analyzed with each analytical batch. Three mls of DCM is spiked at the following concentrations: DCP, 240 ng; MITC, 12.0 μ g; and TCNM, 120 ng. For MIC, 3 ml of ACN is added to the contents of one of the XAD-7 cartridges to solubilize the 2-PP. To this is then added the 0.6 μ g of MIC. The results of the analysis of the spiking solutions are in Table 5.

4.3 Laboratory method blanks

Each analytical batch includes a laboratory method blank. This method blank consists of a charcoal, an XAD-4, or an XAD-7 cartridge prepared and analyzed as described in the SOP's. Analysis did not detect any of the target compounds above the MDL in these blanks. Table 6 shows the analytical results of the laboratory method blanks.

4.4 Laboratory control samples

Each analytical batch includes a laboratory control sample (LCS). These are cartridges (charcoal, XAD-4, XAD-7) spiked with the respective target compounds. The LCS is prepared and analyzed as described in the method SOP's. The average recoveries are as follows; cis and trans-DCP are 73.69 and 73.79%, respectively; MITC is 56.19%; TCNM is 82.32%; and MIC is 124.9% (see Table 7). For MIC, unlike the laboratory spiking solutions, the cartridge is spiked directly in the LCS.

4.5 Calibration check standards

Following standard operating procedures, a calibration check standard is run after the initial calibration and every tenth (10) sample in an analytical batch. The calibration check standard must be within \pm 25% of the target value. If any of the checks are outside the limit, the associated samples are re-analyzed. The calibration check concentration is 40 ng/ml for cis and trans-DCP; 4.0 μ g/ml for MITC; 40.0 ng/ml for TCNM; and 0.13 μ g/ml for MIC. All calibration checks standards were within range.

5.0 FIELD, TRIP, AND LABORATORY SPIKES AND TRIP BLANKS

For the Monterey and Santa Cruz County analysis four (4) field spikes, four (4) trip spikes, four (4) laboratory spikes and eight (8) trip blanks were analyzed during the eight week ambient air testing. The cartridges were spiked about every two weeks.

5.1 Field spikes

The field spike results are in Table 8. The field spikes are sampled at the ARB ambient air monitoring station in Salinas (SAL). An unspiked collocated sample is collected on the same day and is subtracted from the field spike sample to determine the actual spike recovery values. The average percent recovery of the field spikes were 76.4%±12.8 and 86.4%±24.8 for the cis and trans-DCP respectively. The MITC recoveries are 53.5%±3.0. TCNM field spike recoveries were 94.6%±7.5. MIC recoveries are 138.2%±6.5.

5.2 Trip spikes

Table 9 presents the results of the trip spikes. Trip spikes are sent into the field but are not placed on samplers. Average recoveries are 77.3±10.6% and 77.8±9.2% for cis and trans-DCP respectively. For MITC, the recovery is 55.4±3.2%. For TCNM, the recovery is 89.0±1.5%. Recovery for MIC is 140±13%.

5.3 Laboratory spikes

Table 10 presents the results of the laboratory spikes. The laboratory spikes are spiked at the same time as the field and trip. These are stored in the refrigerator and analyzed

with the respective field and trip spike for that week. The recoveries for cis and trans-DCP were 83.3±4.2% and 82.9±3.0% respectively. For MITC recovery is 55.7±6.0%. For TCNM recovery is 85.6±10.3%. Recovery for MIC is 146±18%.

5.4 Trip blanks

Table 11 shows the analytical results for the trip blanks. During each week of monitoring, a cartridge is sent back to the lab as a designated blank. This cartridge is treated and analyzed as for the samples. All of the trip blank results are less than the MDL for the target compounds.

6.0 DISCUSSION

Staff looked at sampling methods to optimize the target compound analysis on the gas chromatograph/ mass selective detector (GC/MSD). The ARB 2000 air monitoring of DCP in Kern and Monterey counties showed MITC present. To optimize the separation of DCP, MITC, and TCNM the GC/MSD column was replaced with an Rtx-200. In the selective ion monitoring (SIM) mode, the target compounds are well resolved. Spikes of all the compounds made on charcoal cartridges and extracted with DCM showed that TCNM was not extractable from these cartridges. Analysis of the compounds on XAD-4 showed poor extraction recovery of the DCP. If DCP and MITC were to be analyzed on the charcoal, then the MITC had to be retained using the flow rate of at least 3 LPM designated for DCP. Field sampling analysis for breakthrough at this flow rate showed no MITC detected in the back bed. The field sampling flow rate for the charcoal cartridge was set at 2.5 LPM (3.6m³ for 24 hour sampling). This meets the requested EQL for DCP corresponding to 12.0 ng/ml and for MITC at 0.6 µg/ml.

The DCP laboratory spike recoveries for the analytical batches are 83.3% and 82.9% for the cis and trans isomer, respectively. The field spikes recovery after subtracting the collocated background is 76.4% and 86.4% respectively for the cis/trans isomers. The chromatographs indicate that there may be some interference near the retention time of the cis isomer. This is particularly noticeable at a lower concentration. The interference maybe a contributing ion from the sampling. The average cis and trans concentrations are 804 and 635 ng/sample, respectively. The median concentration is 331 and 289 ng/sample for the cis/trans isomers, respectively. The maximum concentration observed is at the MES10, log #78 with a concentration of 15.5 and 10.8 µg/sample for the cis and trans. Sample PMS2C#16 has a concentration about three times higher than its collocated site (PMS2#15). This difference may be a result of sample evaporation during extraction since the volume of PMS2C#16 was noticeably less than the extract volume from PMST2#15.

MITC was quantitated in only one of the Monterey samples, SES18 log #148 at 1.56 μ g/ml. MITC is present as a DET in a few of the samples (SES18C, log #149, SES19 log #155, and SES20, log #161). The recovery of MITC for this method averages 58%. Using a different solvent may help improve average recovery, but would necessitate

using an additional cartridge for field sampling. Several of the charcoal cartridges were wet on receipt in the lab. These included the following: CHU5#35; PMS27#217; SES29#236 and SES29C#237. It is not known what effect the wet cartridge has on the analytical results.

TCNM is present at an average concentration of 161ng/sample. The median is 78 ng/sample, and the maximum is 1.87x10³ ng/sample (LJE26#210). The TCNM recovery for the laboratory spikes is 85.6%. Sample was lost on transfer for the laboratory spike prepared on 11/07 and not included in the percent recovery determination. Field spike recovery after subtracting the collocated background is 94.6%. The higher recovery value for the field sampling spikes maybe a result of sampling interferences that can not totally be accounted for. Over two dozen of the XAD-4 cartridges received in the laboratory contained large amounts of moisture. These were noted on sampling day 5, 9, 21, 29, 30, and 31. Loss on transfer occurred with sample MES3#26 when filtering.

Methyl isocyanate analysis requires derivatization with 1-(2-pyridyl)piperazine (2-PP). The derivatived sample is analyzed on the HPLC using a fluorescence detector. Due to instrumental and procedural problems, staff was not able to complete all of the method development and stability testing before monitoring took place. One of the critical factors was the bed size for the cartridges and the concomitant amount of 2-PP extracted that went on the column. Too much of the 2-PP swamped the detection area for MIC. Using two of the 120 mg cartridges placed in tandem, with analysis of the total front cartridge gave the best results. The second cartridge (the back one) is stored for analysis if necessary. A flow rate of 0.075 LPM resulted in a volume of sample that would theoretically meet with the requested EQL of 0.002 µg/ml. The actual analytical EQL was 0.015 μg/ml (0.045 μg/sample). MIC was detected in only a few of the Monterey samples. These were SALM7F#84, LJEM20F#189, MESM20F#191, and SESM20F#192. The field, trip, and laboratory spike recoveries are all high for the MIC. This is due to the narrow window for the detection of the derivatized MIC and the presence of interference peaks. The recovery of one of the control spikes (LCS) is low due to loss on transferring. (Table 7. 11/14).

Table 1A. Instrument Reproducibility-DCP and MITC

	Cis-dic	hloropropene	Trans-di	chloropropene	Methyl iso	othiocyanate
Amount	Area		Area		Area	
	Response	ng/ml	Response	ng/ml	Response	μg/ml
10 ng/ml	1268	5.83	1292	5.73	132155	0.66
	1333	6.17	1318	5.87	125575	0.63
MITC	1293	5.96	1320	5.88	125767	0.63
0.5 μg/ml	1331	6.16	1329	5.92	125180	0.63
	1320	6.10	1347	6.02	128640	0.65
ì	1369	6.36	1352	6.04	131013	0.65
	1381	6.43	1404	6.31	130935	0.65
Average	1328	6.14	1337	5.97	128466	0.64
Standard Dev.	40	0.21	35	0.18	2963	0.01
Rel. Standard Dev.	3.01	3.42	2.62	3.02	2.31	1.56
40 ng/ml	3635	18.31	3696	18.15	485841	2.13
	3685	18.57	3829	18.84	493414	2.16
MITC	3616	18.21	3715	18.25	508214	2.22
2.0 μg/ml	3655	18.41	3733	18.34	507438	2.22
	3613	18.19	3693	18.13	508384	2.22
	3630	18.28	3721	18.28	503662	2.20
	3585	18.05	3632	17.82	478385	2.10
Average	3631	18.29	3717	18.26	497905	2.18
Standard Dev.	32	0.17	59	0.31	12158	0.05
Rel. Standard Dev.	0.88	0.93	1.59	1.70	2.44	2.29
100 ng/mi	18383	96.07	18577	95.02	2249613	9.46
1	18602	97.22	18910	96.74	2345638	9.85
MITC	18553	96.96	18642	95.35	2312210	9.72
10 μg/ml	18398	96.14	18612	95.20	2239236	9.41
	18216	95.18	18407	94.14	2276994	9.57
	18138	94.77	18418	94.20	2211034	9.30
	18295	95.60	18449	94.36	2283279	9.60
Average	18369	95.99	18574	95.00	2274001	9.56
Standard Dev.	169	0.89	176	0.91	45561	0.19
Rel. Standard Dev.	0.92	0.93	0.95	0.96	2.00	1.99

Table 1B. Instrument Reproducibility-TCNM and MIC

	TCNI	TCNM-XAD-4			Methyl isocyanate-XAD-7		
Amount	Area		Amount	Area			
Amount	Response	ng/ml		Response	μg/ml		
5 ng/ml	184	5.59	0.013 ug/m	1.838	0.013		
5 (19/11)	183	5.56		1.867	0.012		
	176	5.35		1.879	0.012		
	165	5.51		1.854	0.012		
	160	5.38	İ	1.913	0.012		
	162	5.43					
	148	5.07	· 1		·		
A	168	5.41	Average	1.870	0.012		
Average	13	0.18	Standard Dev	0.028	0.000		
Standard Dev.	7.74	3.33	Rel. Standard Dev	1.49	NA		
Rel. Standard Dev.	764	20.91	0.078 ug/ml	11.912	0.075		
20 ng/ml	763	20.88	0.07 ± ±g	11.827	0.075		
	706	19.42		11.882	0.075		
	700	19.26		11.927	0.075		
	700 720	19.78		11.866	0.075		
	736	20.19					
	724	19.88					
Average	730	20.05	Average	11.891	0.075		
Average Standard Dev.	25	0.65	Standard Dev	0.052	0.00		
Rel. Standard Dev.	3.42	3.24	Rel. Standard dev.	0.44	NA		
	1970	51.91	0.260 ug/ml	41.254	0.261		
50 ng/ml	1903	50.19		40.253	0.255		
	1994	52.53		40.455	0.256		
	1967	51.83		40.603	0.257		
	1885	49.73		43.821	0.278		
	1913	50.45					
	1848	48.78					
Average	1926	50.77	Average	41.277	0.261		
Standard Dev.	53	1.35	Standard Dev	1.471	0.010		
Rel. Standard Dev.	2.75	2.66	Rel. Standard Dev.	3.56	3.83		

Table 2. Ambient Monitoring Results of cis and trans-DCP and MITC

Site: SAL

					Results:	
Log	Sample	Date	Date	c-DCP	t-DCP	MITC
Number	Identification	Sampled	Analyzed	ng/sample	ng/sample	ug/sample
1	SALT-1	09/08/01	09/14/01	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
9	SALT-2	09/09/01.	09/14/01	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
10	SALT-2C	09/09/01	09/14/01	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
22	SALT-3	09/10/01	09/14/01	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
28	SALT-4	09/11/01	09/14/01	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
34	SALT-5	09/17/01	09/24/01	DET	DET	<mdl< td=""></mdl<>
41	SALT-6	09/18/01	09/24/01	DET	DET	<mdl< td=""></mdl<>
42	SALT-6C	09/18/01	09/24/01	DET	DET	<mdl< td=""></mdl<>
53	SALT-7	09/22/01	10/01/01	5.01E+01	3.87E+01	<mdl< td=""></mdl<>
59	SALT-8	09/23/01	10/01/01	2.32E+01	2.07E+01	<mdl< td=""></mdl<>
65	SALT-9	09/24/01	10/01/01	1.41E+03	9.11E+02	<mdl< td=""></mdl<>
71	SALT-10	09/25/01	10/01/01	8.79E+02	6.66E+02	<mdl< td=""></mdl<>
80	SALT-11	09/26/01	10/01/01	3.86E+02	3.89E+02	<mdl< td=""></mdl<>
81	SALT-11C	09/26/01	10/01/01	3.45E+02	3.46E+02	<mdl< td=""></mdl<>
92	SALT-12	09/27/01	10/01/01	2.44E+03	1.70E+03	<mdl< td=""></mdl<>
98	SALT-13	10/03/01	10/12/01	6.90E+01	6.29E+01	<mdl< td=""></mdl<>
105	SALT-14	10/04/01	10/12/01	<mdl< td=""><td>DET</td><td><mdl< td=""></mdl<></td></mdl<>	DET	<mdl< td=""></mdl<>
106	SALT-14C	10/04/01	10/12/01	DET	DET	<mdl< td=""></mdl<>
117	SALT-15	10/05/01	10/12/01	DET	DET	<mdl< td=""></mdl<>
123	SALT-16	10/06/01	10/12/01	1.68E+03	1.82E+03	<mdl< td=""></mdl<>
129	SALT-17	10/11/01	10/16/01	3.78E+02	3.99E+02	<mdl< td=""></mdl<>
138	SALT-18	10/12/01	10/16/01	6.38E+02	7.05E+02	<mdl< td=""></mdl<>
139	SALT-18C	10/12/01	10/16/01	6.62E+02	7.34E+02	<mdl< td=""></mdl<>
150	SALT-19	10/13/01	10/16/01	9.50E+02	8.96E+02	<mdl< td=""></mdl<>
156	SALT-20	10/14/01	10/16/01	3.52E+02	3.67E+02	<mdl< td=""></mdl<>
162	SALT-21	10/20/01	10/29/01	3.82E+02	3.14E+02	<mdl< td=""></mdl<>
163	SALT-21C	10/20/01	10/29/01	3.31E+02	2.55E+02	<mdl< td=""></mdl<>
174	SALT-22	10/21/01	10/29/01	1.04E+02	7.35E+01	<mdl< td=""></mdl<>
180	SALT-23	10/22/01	10/29/01	8.84E+01	6.33E+01	<mdl< td=""></mdl<>
187	SALT-24	10/23/01	10/29/01	3.83E+03	2.84E+03	<mdl< td=""></mdl<>
193	SALT-25	10/27/01	11/01/01	7.57E+02	6.17E+02	<mdl< td=""></mdl<>
194	SALT-25C	10/27/01	11/01/01	7.96E+02	6.49E+02	<mdl< td=""></mdl<>
208	SALT-26	10/28/01	11/01/01	9.48E+02	4.98E+02	<mdl< td=""></mdl<>
214	SALT-27	10/29/01	11/01/01	9.12E+02	6.72E+02	<mdl< td=""></mdl<>
220	SALT-28	10/30/01	11/01/01	7.59E+02	6.49E+02	<mdl <mdl< td=""></mdl<></mdl
226	SALT-29	11/04/01	11/15/01	1.04E+02	8.55E+01	<mdl< td=""></mdl<>
227	SALT-29C	11/04/01	11/15/01	9.62E+01	7.78E+01 4.85E+01	<mdl< td=""></mdl<>
238	SALT-30	11/05/01	11/15/01	5.89E+01	4.85E+01 6.53E+01	<mdl< td=""></mdl<>
245	SALT-31	11/06/01	11/15/01	7.11E+01		<mdl< td=""></mdl<>
251	SALT-32	11/07/01	11/15/01	1.94E+02	1.28E+02	ZIVIDL

Table 2. Ambient Monitoring Results of cis and trans-DCP and MITC

Site: CHU

					Results:	
Log	Sample	Date	Date	c-DCP	t-DCP	MITC
Number	Identification	Sampled	Analyzed	ng/sample	ng/sample	ug/sample
3	CHUT-1	09/08/01	09/14/01	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
11	CHUT-2	09/09/01	09/14/01	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
12	CHUT-2C	09/09/01	09/14/01	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
23	CHUT-3	09/10/01	09/14/01	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
- 29	CHUT-4	09/11/01	09/14/01	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
35	CHUT-5	09/17/01	09/24/01	DET	DET	<mdl< td=""></mdl<>
43	CHUT-6	09/18/01	09/24/01	DET	DET	<mdl< td=""></mdl<>
44	CHUT-6C	09/18/01	09/24/01	DET	DET	<mdl< td=""></mdl<>
54	CHUT-7	09/22/01	10/01/01	6.83E+01	7.97E+01	<mdl< td=""></mdl<>
60	CHUT-8	09/23/01	10/01/01	4.18E+01	5.03E+01	<mdl< td=""></mdl<>
66	CHUT-9	09/24/01	10/01/01	7.63E+02	5.00E+02	<mdl< td=""></mdl<>
75	CHUT-10	09/25/01	10/01/01	1.93E+02	1.41E+02	<mdl< td=""></mdl<>
82	CHUT-11	09/26/01	10/01/01	5.00E+02	3.08E+02	<mdl< td=""></mdl<>
83	CHUT-11C	09/26/01	10/01/01	4.05E+02	2.31E+02	<mdl< td=""></mdl<>
93 .	CHUT-12	09/27/01	10/01/01	2.89E+02	1.97E+02	<mdl< td=""></mdl<>
100	CHUT-13	10/03/01	10/12/01	1,63E+02	1.27E+02	<mdl< td=""></mdl<>
107	CHUT-14	10/04/01	10/12/01	3.20E+02	2.52E+02	<mdl< td=""></mdl<>
108	CHUT-14C	10/04/01	10/12/01	3.31E+02	2.62E+02	<mdl< td=""></mdl<>
118	CHUT-15	10/05/01	10/12/01	6.23E+02	4.20E+02	<mdl< td=""></mdl<>
124	CHUT-16	10/06/01	10/12/01	3.68E+02	3.20E+02	<mdl< td=""></mdl<>
133	CHUT-17	10/11/01	10/16/01	1.52E+02	1.68E+02	<mdl< td=""></mdl<>
140	CHUT-18	10/12/01	10/16/01	2.49E+02	2.85E+02	<mdl< td=""></mdl<>
141	CHUT-18C	10/12/01	10/16/01	2.52E+02	2.91E+02	<mdl< td=""></mdl<>
151	CHUT-19	10/13/01	10/16/01	7.45E+02	3.87E+02	<mdl< td=""></mdl<>
157	CHUT-20	10/14/01	10/16/01	3.42E+02	2.15E+02	<mdl< td=""></mdl<>
164	CHUT-21	10/20/01	10/29/01	6.53E+02	5.40E+02	<mdl< td=""></mdl<>
165	CHUT-21C	10/20/01	10/29/01	6.10E+02	4.99E+02	<mdl <mdl< td=""></mdl<></mdl
175	CHUT-22	10/21/01	10/29/01	2.42E+02	1.44E+02 1.05E+02	<mdl< td=""></mdl<>
181	CHUT-23	10/22/01	10/29/01	1.23E+02	2.42E+02	<mdl< td=""></mdl<>
188	CHUT-24	10/23/01	10/29/01 11/01/01	2.97E+02 8.55E+02	6.94E+02	<mdl< td=""></mdl<>
195	CHUT-25	10/27/01	11/01/01	8.96E+02	7.35E+02	<mdl< td=""></mdl<>
196	CHUT-25C	10/27/01 10/28/01	11/01/01	3.75E+02	3.33E+02	<mdl< td=""></mdl<>
209 215	CHUT-26 CHUT-27	10/28/01	11/01/01	2.71E+03	1.85E+03	<mdl< td=""></mdl<>
215	CHUT-27 CHUT-28	10/29/01	11/01/01	4.87E+03	4.05E+03	<mdl< td=""></mdl<>
228	CHUT-28 CHUT-29	11/04/01	11/15/01	2.48E+02	3.16E+02	<mdl< td=""></mdl<>
229	CHUT-29 CHUT-29C	11/04/01	11/15/01	2.51E+02	3.22E+02	<mdl< td=""></mdl<>
240	CHUT-30	11/05/01	11/15/01	4.35E+01	4.60E+01	<mdl< td=""></mdl<>
246	CHUT-31	11/06/01	11/15/01	3.67E+01	3.75E+01	<mdl< td=""></mdl<>
252	CHUT-32	11/07/01	11/15/01	1.23E+02	1.09E+02	<mdl< td=""></mdl<>

Table 2. Ambient Monitoring Results of cis and trans-DCP and MITC

Site: LJE

OILC. LOL	Site: LJE								
		į			Results:				
Log	Sample	Date	Date	c-DCP	t-DCP	MITC			
Number	Identification	Sampled	Analyzed	ng/sample	ng/sample	ug/sample			
4	LJET-1	09/08/01	09/14/01	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>			
13	LJET-2	09/09/01	09/14/01	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>			
14	LJET-2C	09/09/01	09/14/01	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>			
24	LJET-3	09/10/01	09/14/01	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>			
30	LJET-4	09/11/01	09/14/01	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>			
36	LJET-5	09/17/01	09/24/01	DET	DET	<mdl< td=""></mdl<>			
45	LJET-6	09/18/01	09/24/01	DET	DET	<mdl< td=""></mdl<>			
46	LJET-6C	09/18/01	09/24/01	DET	DET	<mdl< td=""></mdl<>			
55	LJET-7	09/22/01	10/01/01	6.39E+01	4.62E+01	<mdl< td=""></mdl<>			
61	LJET-8	09/23/01	10/01/01	5.27E+01	4.20E+01	<mdl< td=""></mdl<>			
67	LJET-9	09/24/01	10/01/01	8.13E+01	6.51E+01	<mdl< td=""></mdl<>			
76	LJET-10	09/25/01	10/01/01	4.97E+02	3.80E+02	<mdl< td=""></mdl<>			
84	LJET-11	09/26/01	10/01/01	1.56E+02	1.62E+02	<mdl< td=""></mdl<>			
85	LJET-11C	09/26/01	10/01/01	1.55E+02	1.63E+02	<mdl< td=""></mdl<>			
94	LJET-12	09/27/01	10/01/01	1.58E+03	1.05E+03	<mdl< td=""></mdl<>			
101	LJET-13	10/03/01	10/12/01	2.30E+02	1.90E+02	<mdl< td=""></mdl<>			
109	LJET-14	10/04/01	10/12/01	1.11E+02	1.07E+02	<mdl< td=""></mdl<>			
110	LJET-14C	10/04/01	10/12/01	1.08E+02	1.06E+02	<mdl< td=""></mdl<>			
119	LJET-15	10/05/01	10/12/01	7.43E+01	7.69E+01	<mdl< td=""></mdl<>			
125	LJET-16	10/06/01	10/12/01	2.71E+02	2.93E+02	<mdl< td=""></mdl<>			
134	LJET-17	10/11/01	10/16/01	2.18E+02	2.35E+02	<mdl< td=""></mdl<>			
142	LJET-18	10/12/01	10/16/01	4.08E+02	3.84E+02	<mdl< td=""></mdl<>			
143	LJET-18C	10/12/01	10/16/01	4.43E+02	4.16E+02	<mdl< td=""></mdl<>			
152	LJET-19	10/13/01	10/16/01	3.74E+02	3.56E+02	<mdl< td=""></mdl<>			
158	LJET-20	10/14/01	10/16/01	2.15E+02	2.23E+02	<mdl< td=""></mdl<>			
166	LJET-21	10/20/01	10/29/01	1.93E+02	1.55E+02	<mdl< td=""></mdl<>			
167	LJET-21C	10/20/01	10/29/01	1.92E+02	1.54E+02	<mdl< td=""></mdl<>			
176	LJET-22	10/21/01	10/29/01	1.65E+02	1.22E+02	<mdl< td=""></mdl<>			
182	LJET-23	10/22/01	10/29/01	1.86E+01	DET	<mdl< td=""></mdl<>			
189	LJET-24	10/23/01	10/29/01	8.56E+03	6.61E+03	<mdl< td=""></mdl<>			
197	LJET-25	10/27/01	11/01/01	1.18E+03	1.02E+03	<mdl< td=""></mdl<>			
198	LJET-25C	10/27/01	11/01/01	1.23E+03	1.07E+03 5.33E+02	<mdl <mdl< td=""></mdl<></mdl 			
210	LJET-26	10/28/01	11/01/01	8.09E+02	8.45E+02	<mdl< td=""></mdl<>			
216	LJET-27	10/29/01	11/01/01 11/01/01	1.15E+03 8.36E+02	7.55E+02	<mdl< td=""></mdl<>			
222	LJET-28 LJET-29	10/30/01 11/04/01	11/15/01	2.10E+02	1.94E+02	<mdl< td=""></mdl<>			
230 231		11/04/01	11/15/01	2.10E+02 2.07E+02	1.88E+02	<mdl< td=""></mdl<>			
231	LJET-29C LJET-30	11/04/01	11/15/01	2.07E+02 2.15E+02	1.78E+02	<mdl< td=""></mdl<>			
241	LJET-31	11/06/01	11/15/01	1.79E+02	1.65E+02	<mdl< td=""></mdl<>			
253	LJET-32	11/07/01	11/15/01	2.93E+02	2.08E+02	<mdl< td=""></mdl<>			
200	LJE1-32	11/0//01	11/15/01	2.93ETUZ	Z.00E+0Z	-IVIDL			

Table 2. Ambient Monitoring Results of cis and trans-DCP and MITC

Site: PMS

				Results:		
Log	Sample	Date	Date	c-DCP	t-DCP	MITC
Number	Identification	Sampled	Analyzed	ng/sample	ng/sample	ug/sample
. 5	PMST-1	09/08/01	09/14/01	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
15	PMST-2	09/09/01	09/14/01	9.24E+01	8.75E+01	<mdl< td=""></mdl<>
16	PMST-2C	09/09/01	09/14/01	3.24E+02	3.03E+02	<mdl< td=""></mdl<>
25	PMST-3	09/10/01	09/14/01	2.01E+02	1.73E+02	<mdl< td=""></mdl<>
31	PMST-4	09/11/01	09/14/01	1.66E+02	1.40E+02	<mdl< td=""></mdl<>
37	PMST-5	09/17/01	09/24/01	3.30E+02	2.58E+02	<mdl< td=""></mdl<>
47	PMST-6	09/18/01	09/24/01	3.87E+02	3.18E+02	<mdl< td=""></mdl<>
48	PMST-6C	09/18/01	09/24/01	3.77E+02	3.10E+02	<mdl< td=""></mdl<>
. 56	PMST-7	09/22/01	10/01/01	2.67E+02	2.26E+02	<mdl< td=""></mdl<>
62	PMST-8	09/23/01	10/01/01	3.55E+02	2.90E+02	<mdl< td=""></mdl<>
68	PMST-9	09/24/01	10/01/01	1.94E+03	1.41E+03	<mdl< td=""></mdl<>
77	PMST-10	09/25/01	10/01/01	8.24E+03	6.03E+03	<mdl< td=""></mdl<>
86	PMST-11	09/26/01	10/01/01	1.41E+03	1.17E+03	<mdl< td=""></mdl<>
87	PMST-11C	09/26/01	10/01/01	1.34E+03	1.08E+03	<mdl< td=""></mdl<>
95	PMST-12	09/27/01	10/01/01	2.91E+03	2.29E+03	<mdl< td=""></mdl<>
102	PMST-13	10/03/01	10/12/01	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
111	PMST-14	10/04/01	10/12/01	2.08E+02	1.79E+02	<mdl< td=""></mdl<>
112	PMST-14C	10/04/01	10/12/01	2.22E+02	1.90E+02	<mdl< td=""></mdl<>
120	PMST-15	10/05/01	10/12/01	2.97E+02	2.89E+02	<mdl< td=""></mdl<>
126	PMST-16	10/06/01	10/12/01	3.64E+02	3.37E+02	<mdl< td=""></mdl<>
135	PMST-17	10/11/01	10/16/01	7.78E+02	6.90E+02	<mdl< td=""></mdl<>
144	PMST-18	10/12/01	10/16/01	1.92E+03	1.52E+03	<mdl< td=""></mdl<>
145	PMST-18C	10/12/01	10/16/01	1.82E+03	1.44E+03	<mdl< td=""></mdl<>
153	PMST-19	10/13/01	10/16/01	1.01E+03	8.55E+02	<mdl< td=""></mdl<>
159	PMST-20	10/14/01	10/16/01	7.11E+02	6.66E+02	<mdl< td=""></mdl<>
168	PMST-21	10/20/01	10/29/01	3.57E+02	3.25E+02	<mdl< td=""></mdl<>
169	PMST-21C	10/20/01	10/29/01	3.55E+02	3.10E+02	<mdl< td=""></mdl<>
177	PMST-22	10/21/01	10/29/01	2.40E+02	1.78E+02	<mdl< td=""></mdl<>
183	PMST-23	10/22/01	10/29/01	3.33E+02	2.72E+02	<mdl< td=""></mdl<>
190	PMST-24	10/23/01	10/29/01	6.53E+02	5.96E+02	<mdl< td=""></mdl<>
199	PMST-25	10/27/01	11/01/01	1.60E+02	1.64E+02	<mdl< td=""></mdl<>
200	PMST-25C	10/27/01	11/01/01	1.64E+02	1.68E+02	<mdl< td=""></mdl<>
211	PMST-26	10/28/01	11/01/01	9.30E+01	9.99E+01	<mdl< td=""></mdl<>
217	PMST-27	10/29/01	11/01/01	3.76E+03	2.68E+03	<mdl< td=""></mdl<>
223	PMST-28	10/30/01	11/01/01	2.45E+02	2.06E+02	<mdl< td=""></mdl<>
232	PMST-29	11/04/01	11/15/01	1.82E+02	1.61E+02	<mdl< td=""></mdl<>
233	PMST-29C	11/04/01	11/15/01	1.70E+02	1.51E+02	<mdl< td=""></mdl<>
242	PMST-30	11/05/01	11/15/01	2.43E+02	1.87E+02	<mdl< td=""></mdl<>
248	PMST-31	11/06/01	11/15/01	4.27E+02	2.92E+02	<mdl< td=""></mdl<>
254	PMST-32	11/07/01	11/15/01	4.49E+02	3.19E+02	<mdl< td=""></mdl<>

Table 2. Ambient Monitoring Results of cis and trans-DCP and MITC

Site: MES

				Results:		
Log	Sample	Date	Date	c-DCP	t-DCP	MITC
Number	Identification	Sampled	Analyzed	ng/sample	ng/sample	ug/sample
6	MEST-1	09/08/01	09/14/01	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
17	MEST-2	09/09/01	09/14/01	1.20E+03	1.04E+03	<mdl< td=""></mdl<>
18	MEST-2C	09/09/01	09/1 <i>4/</i> 01	1.00E+03	8.88E+02	<mdl< td=""></mdl<>
26	MEST-3	09/10/01	09/14/01	2.81E+02	2.36E+02	<mdl< td=""></mdl<>
32	MEST-4	09/11/01	09/14/01	1.33E+03	1.03E+03	<mdl< td=""></mdl<>
38	MEST-5	09/17/01	09/24/01	3.46E+02	2.69E+02	<mdl< td=""></mdl<>
49	MEST-6	09/18/01	09/24/01	3.08E+02	2.59E+02	<mdl< td=""></mdl<>
50	MEST-6C	09/18/01	09/24/01	3.03E+02	2.49E+02	<mdl< td=""></mdl<>
57	MEST-7	09/22/01	10/01/01	7.14E+02	5.29E+02	<mdl< td=""></mdl<>
63	MEST-8	09/23/01	10/01/01	4.20E+02	3.19E+02	<mdl< td=""></mdl<>
69	MEST-9	09/24/01	10/01/01	9.85E+03	6.82E+03	<mdl< td=""></mdl<>
78	MEST-10	09/25/01	10/01/01	1.55E+04	1.08E+04	<mdl< td=""></mdl<>
88	MEST-11	09/26/01	10/01/01	3.22E+03	2.42E+03	<mdl< td=""></mdl<>
89	MEST-11C	09/26/01	10/01/01	5.66E+03	4.13E+03	<mdl< td=""></mdl<>
96	MEST-12	09/27/01	10/01/01	5.32E+03	3.93E+0 <u>,</u> 3	<mdl< td=""></mdl<>
103	MEST-13	10/03/01	10/12/01	2.27E+01	DET	<mdl< td=""></mdl<>
113	MEST-14	10/04/01	10/12/01	3.53E+02	2.98E+02	<mdl< td=""></mdl<>
114	MEST-14C	10/04/01	10/12/01	3.62E+02	3.18E+02	<mdl< td=""></mdl<>
121	MEST-15	10/05/01	10/12/01	4.30E+02	3.79E+02	<mdl .<="" td=""></mdl>
127	MEST-16	10/06/01	10/12/01	2.20E+03	1.85E+03	<mdl< td=""></mdl<>
136	MEST-17	10/11/01	10/16/01	5.81E+02	5.38E+02	<mdl< td=""></mdl<>
146	MEST-18	10/12/01	10/16/01	1.96E+03	1.56E+03	<mdl< td=""></mdl<>
147	MEST-18C	10/12/01	10/16/01	1.96E+03	1.56E+03	<mdl< td=""></mdl<>
154	MEST-19	10/13/01	10/16/01	1.66E+03	1.55E+03	<mdl< td=""></mdl<>
160	MEST-20	10/14/01	10/16/01	2.22E+03	2.33E+03	<mdl< td=""></mdl<>
170	MEST-21	10/20/01	10/29/01	1.67E+03	1.38E+03	<mdl< td=""></mdl<>
171	MEST-21C	10/20/01	10/29/01	1.67E+03	1.36E+03	<mdl< td=""></mdl<>
178	MEST-22	10/21/01	10/29/01	1.73E+02	1.26E+02	<mdl< td=""></mdl<>
184	MEST-23	10/22/01	10/29/01	5.30E+02	4.56E+02	<mdl< td=""></mdl<>
191	MEST-24	10/23/01	10/29/01	1.17E+03	1.09E+03	<mdl< td=""></mdl<>
201	MEST-25	10/27/01	11/01/01	4.96E+02	4.86E+02	<mdl <mdl< td=""></mdl<></mdl
202	MEST-25C	10/27/01	11/01/01	5.04E+02	4.96E+02 4.28E+02	<mdl< td=""></mdl<>
212 218	MEST-26	10/28/01 10/29/01	11/01/01 11/01/01	3.92E+02 5.08E+02	4.28E+02 4.44E+02	<mdl< td=""></mdl<>
218	MEST-27 MEST-28	10/29/01	11/01/01	7.55E+01	8.63E+01	<mdl< td=""></mdl<>
234	MEST-28 MEST-29	11/04/01	11/01/01	1.75E+02	1.61E+02	<mdl< td=""></mdl<>
235	MEST-29C	11/04/01	11/15/01	1.63E+02	1.48E+02	<mdl< td=""></mdl<>
243	MEST-29C	11/05/01	11/15/01	1.88E+02	1.81E+02	<mdl< td=""></mdl<>
249	MEST-31	11/06/01	11/15/01	2.77E+02	2.26E+02	<mdl< td=""></mdl<>
255.	MEST-32	11/07/01	11/15/01	2.59E+02	1.58E+02	<mdl< td=""></mdl<>

Table 2. Ambient Monitoring Results of cis and trans-DCP and MITC

Site: SES

Site: SES	·			Results:		
Log	Sample	Date	Date	c-DCP	t-DCP	MITC
Number	Identification	Sampled	Analyzed	ng/sample	ng/sample	ug/sample
7	SEST-1	09/08/01	09/14/01	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
19	SEST-2	09/09/01	09/14/01	8.93E+01	7.19E+01	<mdl< td=""></mdl<>
20	SEST-2C	09/09/01	09/14/01	7.37E+01	5.99E+01	<mdl< td=""></mdl<>
27	SEST-3	09/10/01	09/14/01	DET	DET	<mdl< td=""></mdl<>
33	SEST-4	09/11/01	09/14/01	3.52E+01	2.05E+01	<mdl< td=""></mdl<>
39	SEST-5	09/17/01	09/24/01	2.77E+02	2.24E+02	<mdl< td=""></mdl<>
51	SEST-6	09/18/01	09/24/01	4.94E+02	3.72E+02	<mdl< td=""></mdl<>
52	SEST-6C	09/18/01	09/24/01	3.68E+02	2.89E+02	<mdl< td=""></mdl<>
58	SEST-7	09/22/01	10/01/01	1.42E+03	9.40E+02	<mdl< td=""></mdl<>
64	SEST-8	09/23/01	10/01/01	4.20E+02	3.18E+02	<mdl< td=""></mdl<>
70	SEST-9	09/24/01	10/01/01	2.45E+02	1.95E+02	<mdl< td=""></mdl<>
79	SEST-10	09/25/01	10/01/01	6.59E+02	4.84E+02	<mdl< td=""></mdl<>
90	SEST-11	09/26/01	10/01/01	1.05E+03	8.28E+02	<mdl< td=""></mdl<>
91	SEST-11C	09/26/01	10/01/01	1.04E+03	8.27E+02	<mdl< td=""></mdl<>
97	SEST-12	09/27/01	10/01/01	3.89E+02	2.94E+02	<mdl< td=""></mdl<>
104	SEST-13	10/03/01	10/12/01	2.90E+01	2.12E+01	<mdl< td=""></mdl<>
115	SEST-14	10/04/01	10/12/01	7.20E+01	6.66E+01	<mdl< td=""></mdl<>
116	SEST-14C	10/04/01	10/12/01	7.37E+01	6.88E+01	<mdl< td=""></mdl<>
122	SEST-15	10/05/01	10/12/01	2.40E+02	2.08E+02	<mdl< td=""></mdl<>
128	SEST-16	10/06/01	10/12/01	5.01E+01	5.28E+01	<mdl< td=""></mdl<>
137	SEST-17	10/11/01	10/16/01	1.38E+02	1.12E+02	<mdl< td=""></mdl<>
148	SEST-18	10/12/01	10/16/01	2.55E+02	1.91E+02	1.56E+00
149	SEST-18C	10/12/01	10/16/01	2.19E+02	1.68E+02	DET
155	SEST-19	10/13/01	10/16/01	1.53E+02	1.38E+02	DET
161	SEST-20	10/14/01	10/16/01	1.14E+02	1.01E+02	DET
172	SEST-21	10/20/01	10/29/01	1.00E+03	7.61E+02	<mdl< td=""></mdl<>
173	SEST-21C	10/20/01	10/29/01	1.01E+03	7.73E+02	<mdl< td=""></mdl<>
179	SEST-22	10/21/01	10/29/01	1.12E+02	8.48E+01	<mdl< td=""></mdl<>
185	SEST-23	10/22/01	10/29/01	1.40E+02	1.04E+02	<mdl< td=""></mdl<>
192	SEST-24	10/23/01	10/29/01	2.06E+02	1.57E+02	<mdl< td=""></mdl<>
203	SEST-25	10/27/01	11/01/01	1.43E+02	1.32E+02	<mdl< td=""></mdl<>
204	SEST-25C	10/27/01	11/01/01	1.43E+02	1.30E+02	<mdl< td=""></mdl<>
213	SEST-26	10/28/01	11/01/01	1.86E+02	1.87E+02	<mdl< td=""></mdl<>
219	SEST-27	10/29/01	11/01/01	1.76E+02	1.69E+02	<mdl< td=""></mdl<>
225	SEST-28	10/30/01	11/01/01	4.77E+01	5.23E+01	<mdl< td=""></mdl<>
236	SEST-29	11/04/01	11/15/01	2.13E+02	1.71E+02	<mdl< td=""></mdl<>
237	SEST-29C	11/04/01	11/15/01	2.16E+02	1.74E+02	<mdl< td=""></mdl<>
244	SEST-30	11/05/01	11/15/01	1.52E+02	1.20E+02	<mdl< td=""></mdl<>
250	SEST-31	11/06/01	11/15/01	6.89E+02	4.23E+02	<mdl< td=""></mdl<>
256	SEST-32	11/07/01	11/15/01	6.05E+02	4.40E+02	<mdl< td=""></mdl<>

Table 3. Ambient Monitoring Results of TCNM

Site: SAL

Log	Sample	Date	Date	Results:
Number	Identification	Sampled	Analyzed	ng/sample
1	SALL-1	09/08/01	09/19/01	DET
9	, SALL-2	09/09/01	09/19/01	3.85E+01
10	SALL-2C	09/09/01	09/19/01	2.59E+01
22	SALL-3	09/10/01	09/19/01	2.09E+02
28	SALL-4	09/11/01	09/19/01	1.13E+02
34	SALL-5	09/17/01	09/21/01	<mdl< td=""></mdl<>
41	SALL-6	09/18/01	09/21/01	DET
42	SALL-6C	09/18/01	09/21/01	<mdl< td=""></mdl<>
53	SALL-7	09/22/01	10/05/01	3.83E+01
59	SALL-8	09/23/01	10/05/01	DET
65	SALL-9	09/24/01	10/05/01	3.25E+01
71	SALL-10	09/25/01	10/05/01	2.27E+02
80	SALL-11	09/26/01	10/05/01	3.18E+01
81	SALL-11C	09/26/01	10/05/01	3.28E+01
92	SALL-12	09/27/01	10/05/01	3.13E+01
98	SALL-13	10/03/01	10/09/01	DET
105	SALL-14	10/04/01	10/09/01	<mdl< td=""></mdl<>
106	SALL-14C	10/04/01	10/09/01	DET
117	SALL-15	10/05/01	10/09/01	DET
123	SALL-16	10/06/01	10/09/01	1.01E+02
129	SALL-17	10/11/01	10/19/01	1.08E+02
138	SALL-18	10/12/01	10/19/01	3.41E+02
139	SALL-18C	10/12/01	10/19/01	3.58E+02
150	SALL-19	10/13/01	10/19/01	4.05E+02
156	SALL-20	10/14/01	10/19/01	2.88E+02
162	SALL-21	10/20/01	10/25/01	7.77E+01
163	SALL-21C	10/20/01	10/25/01	8.35E+01
174	SALL-22	10/21/01	10/25/01	3.81E+01
180	SALL-23	10/22/01	10/25/01	DET
187	SALL-24	10/23/01	10/25/01	1.11E+02
193	SALL-25	10/27/01	11/07/01	9.80E+01
194	SALL-25C	10/27/01	11/07/01	9.68E+01
208	SALL-26	10/28/01	11/07/01	6.92E+01
214	SALL-27	10/29/01	11/07/01	7.03E+01
220	SALL-28	10/30/01	11/07/01	4.47E+01
226	SALL-29	11/04/01	11/13/01	2.18E+01
227	SALL-29C	11/04/01	11/13/01	2.04E+01
238	SALL-30	11/05/01	11/13/01	DET
245	SALL-31	11/06/01	11/13/01	DET
251	SALL-32	11/07/01	11/13/01	DET

Table 3. Ambient Monitoring Results of TCNM

Site: CHU

Log	Sample	Date	Date	Results:
Number	Identification	Sampled	Analyzed	ng/sample
3	CHUL-1	09/08/01	09/19/01	DET
11	CHUL-2	09/09/01	09/19/01	3.96E+01
12	CHUL-2C	09/09/01	09/19/01	3.36E+01
23	CHUL-3	09/10/01	09/19/01	3.33E+01
29	CHUL-4	09/11/01	09/19/01	3.67E+01
35	CHUL-5	09/17/01	09/21/01	DET
43	CHUL-6	09/18/01	09/21/01	<mdl< td=""></mdl<>
44	CHUL-6C	09/18/01	09/21/01	<mdl< td=""></mdl<>
54	CHUL-7	09/22/01	10/05/01	2.31E+01
60	CHUL-8	09/23/01	10/05/01	2.03E+01
66	CHUL-9	09/24/01	10/05/01	2.06E+01
75	CHUL-10	09/25/01	10/05/01	1.14E+02
82	CHUL-11	09/26/01	10/05/01	4.46E+01
83	CHUL-11C	09/26/01	10/05/01	2.94E+01
93	CHUL-12	09/27/01	10/05/01	2.69E+01
100	CHUL-13	10/03/01	10/09/01	DET
107	CHUL-14	10/04/01	10/09/01	<mdl< td=""></mdl<>
108	CHUL-14C	10/04/01	10/09/01	DET
118	CHUL-15	10/05/01	10/09/01	DET
124	CHUL-16	10/06/01	10/09/01	4.93E+01
133	CHUL-17	10/11/01	10/19/01	6.53E+01
140	CHUL-18	10/12/01	10/19/01	8.57E+01
141	CHUL-18C	10/12/01	10/19/01	8.63E+01
151	CHUL-19	10/13/01	10/19/01	1.34E+02
157	CHUL-20	10/14/01	10/19/01	6.54E+01
164	CHUL-21	10/20/01	10/25/01	5.72E+01
165	CHUL-21C	10/20/01	10/25/01	5.56E+01
175	CHUL-22	10/21/01	10/25/01	2.80E+01
181	CHUL-23	10/22/01	10/25/01	3.32E+01
188	CHUL-24	10/23/01	10/25/01	1.82E+02
195	CHUL-25	10/27/01	11/07/01	2.87E+01
196	CHUL-25C	10/27/01	11/07/01	3.05E+01
209	CHUL-26	10/28/01	11/07/01	2.41E+01
215	CHUL-27	10/29/01	11/07/01	4.31E+01
221	CHUL-28	10/30/01	11/07/01	3.18E+01
228	CHUL-29	11/04/01	11/13/01	2.47E+01
229	CHUL-29C	11/04/01	11/13/01	2.10E+01
240	CHUL-30	11/05/01	11/13/01	DET
246	CHUL-31	11/06/01	11/13/01	DET
252	CHUL-32	11/07/01	11/13/01	2.58E+01

Table 3. Ambient Monitoring Results of TCNM

Site: LJE

Log	Sample	Date	Date	Results:
Number	Identification	Sampled	Analyzed	ng/sample
4	LJEL-1	09/08/01	09/19/01	<mdl< td=""></mdl<>
13	LJEL-2	09/09/01	09/19/01	2.44E+02
14	LJEL-2C	09/09/01	09/19/01	2.64E+02
24	LJEL-3	09/10/01	09/19/01	1.02E+02
30	LJEL-4	09/11/01	09/19/01	4.66E+01
36	LJEL-5	09/17/01	09/21/01	DET
45	LJEL-6	09/18/01	09/21/01	DET
46	LJEL-6C	09/18/01	09/21/01	DET
55	LJEL-7	09/22/01	10/05/01	7.65E+01
61	LJEL-8	09/23/01	10/05/01	4.40E+01
67	LJEL-9	09/24/01	10/05/01	5.32E+01
76	LJEL-10	09/25/01	10/05/01	7.48E+01
84	LJEL-11	09/26/01	10/05/01	2.66E+01
85	LJEL-11C	09/26/01	10/05/01	DET
94	LJEL-12	09/27/01	10/05/01	DET
101	LJEL-13	10/03/01	10/09/01	2.10E+01
109	LJEL-14	10/04/01	10/09/01	DET
110	LJEL-14C	10/04/01	10/09/01	DET
119	LJEL-15	10/05/01	10/09/01	DET
125	LJEL-16	10/06/01	10/09/01	3.38E+01
134	LJEL-17	10/11/01	10/19/01	7.61E+01
142	LJEL-18	10/12/01	10/19/01	3.15E+02
143 152	LJEL-18C	10/12/01	10/19/01	3.32E+02
158	LJEL-19 LJEL-20	10/13/01 10/14/01	10/19/01 10/19/01	1.10E+03 4.94E+02
166	LJEL-20 LJEL-21	10/14/01	10/19/01	1.54E+02
167	LJEL-21C	10/20/01	10/25/01	1.15E+02
176	LJEL-22	10/20/01	10/25/01	3.45E+01
182	LJEL-23	10/21/01	10/25/01	DET
189	LJEL-24	10/23/01	10/25/01	4.90E+02
197	LJEL-25	10/27/01	11/07/01	2.17E+02
198	LJEL-25C	10/27/01	11/07/01	2.28E+02
210	LJEL-26	10/28/01	11/07/01	1.87E+03
216	LJEL-27	10/29/01	11/07/01	8.75E+02
222	LJEL-28	10/30/01	11/07/01	2.26E+02
230	LJEL-29	11/04/01	11/13/01	2.87E+01
231	LJEL-29C	11/04/01	11/13/01	2.69E+01
241	LJEL-30	11/05/01	11/13/01	1.99E+01
247	LJEL-31	11/06/01	11/13/01	DET
253	LJEL-32	11/07/01	11/13/01	DET

Table 3. Ambient Monitoring Results of TCNM

Site: PMS

Log	Sample	Date	Date	Results:
Number	Identification	Sampled	Analyzed	ng/sample
5	PMSL-1	09/08/01	09/19/01	DET
15	PMSL-2	09/09/01	09/19/01	1.43E+02
16	PMSL-2C	09/09/01	09/19/01	1.32E+02
25	PMSL-3	09/10/01	09/19/01	1.31E+02
. 31	PMSL-4	09/11/01	09/19/01	9.76E+01
37	PMSL-5	09/17/01	09/21/01	7.72E+01
47	PMSL-6	09/18/01	09/21/01	4.17E+01
48	PMSL-6C	09/18/01	09/21/01	4.02E+01
56	PMSL-7	09/22/01	10/05/01	8.78E+01
62	PMSL-8	09/23/01	10/05/01	6.17E+01
68	PMSL-9	09/24/01	10/05/01	1.76E+02
.77	PMSL-10	09/25/01	10/05/01	5.53E+02
86	PMSL-11	09/26/01	10/05/01	2.16E+02
87	PMSL-11C	09/26/01	10/05/01	1.97E+02
95	PMSL-12	09/27/01	10/05/01	3.37E+02
102	PMSL-13	10/03/01	10/09/01	2.24E+01
111	PMSL-14	10/04/01	10/09/01	7.56E+01
112	PMSL-14C	10/04/01	10/09/01	6.65E+01
120	PMSL-15	10/05/01	10/09/01	1.52E+02
126	PMSL-16	10/06/01	10/09/01	3.28E+02
135	PMSL-17	10/11/01	10/19/01	1.42E+02
144	PMSL-18	10/12/01	10/19/01	9.83E+02
145	PMSL-18C	10/12/01	10/19/01	9.74E+02
153	PMSL-19	10/13/01	10/19/01	5.73E+02
159	PMSL-20	10/14/01	10/19/01	3.44E+02
168	PMSL-21	10/20/01	10/25/01	1.35E+02
169	PMSL-21C	10/20/01	10/25/01	1.45E+02
177	PMSL-22	10/21/01	10/25/01	4.07E+01
183	PMSL-23	10/22/01	10/25/01	4.80E+01
190	PMSL-24	10/23/01	10/25/01	1.40E+02
199	PMSL-25	10/27/01	11/07/01	1.28E+02
200	PMSL-25C	10/27/01	11/07/01	1.30E+02
. 211	PMSL-26	10/28/01	11/07/01	4.22E+01
217	PMSL-27	10/29/01	11/07/01	1.45E+02
223	PMSL-28	10/30/01	11/07/01	2.44E+01
232	PMSL-29	11/04/01	11/13/01	DET
233	PMSL-29C	11/04/01	11/13/01	DET
242	PMSL-30	11/05/01	11/13/01	2.92E+01
248	PMSL-31	11/06/01	11/13/01	4.30E+01
254	PMSL-32	11/07/01	11/13/01	2.93E+01

Table 3. Ambient Monitoring Results of TCNM

Site: MES

Log	Sample	Date	Date	Results:
Number	Identification	Sampled	Analyzed	ng/sample
6	MESL-1	09/08/01	09/19/01	<mdl< td=""></mdl<>
17	MESL-2	09/09/01	09/19/01	6.76E+01
18	MESL-2C	09/09/01	09/19/01	6.33E+01
26	MESL-3	09/10/01	09/19/01	NA
32	MESL-4	09/11/01	09/19/01	1.24E+02
38	MESL-5	09/17/01	09/21/01	4.64E+01
49	MESL-6	09/18/01	09/21/01	2.16E+01
50	MESL-6C	09/18/01	09/21/01	3.53E+01
57	MESL-7	09/22/01	10/05/01	6.55E+01
63	MESL-8	09/23/01	10/05/01	4.88E+01
69	MESL-9	09/24/01	10/05/01	5.58E+02
78	MESL-10	09/25/01	10/05/01	1.01E+03
88	MESL-11	09/26/01	10/05/01	4.09E+02
89	MESL-11C	09/26/01	10/05/01	4.40E+02
96	MESL-12	09/27/01	10/05/01	5.25E+02
103	MESL-13	10/03/01	10/09/01	DET
113	MESL-14	10/04/01	10/09/01	9.87E+01
114	MESL-14C	10/04/01	10/09/01	9.20E+01
121	MESL-15	10/05/01	10/09/01	1.48E+02
127	MESL-16	10/06/01	10/09/01	8.72E+02
136	MESL-17	10/11/01	10/19/01	3.03E+02
146	MESL-18	10/12/01	10/19/01	3.70E+02
147	MESL-18C	10/12/01	10/19/01	4.12E+02
154	MESL-19	10/13/01	10/19/01	2.82E+02
160	MESL-20	10/14/01	10/19/01	1.65E+02
170	MESL-21	10/20/01	10/25/01	4.65E+02
171	MESL-21C	10/20/01	10/25/01	4.50E+02
178	MESL-22	10/21/01	10/25/01	4.10E+01
184	MESL-23	10/22/01	10/25/01	7.72E+01
191	MESL-24	10/23/01	10/25/01	1.98E+02
201	MESL-25	10/27/01	11/07/01	1.82E+02
202	MESL-25C	10/27/01	11/07/01	2.01E+02
212	MESL-26	10/28/01	11/07/01	1.89E+02
218	MESL-27	10/29/01	11/07/01	2.36E+02
224	MESL-28	10/30/01	11/07/01	5.81E+01
234	MESL-29	11/04/01	11/13/01	DET
235	MESL-29C	11/04/01	11/13/01	DET
243	MESL-30	11/05/01	11/13/01	6.23E+01
249	MESL-31	11/06/01	11/13/01	6.84E+01
255	MESL-32	11/07/01	11/13/01	3.38E+01

Table 3. Ambient Monitoring Results of TCNM

Site: SES

Log	Sample	Date	Date	Results:
Number	Identification	Sampled	Analyzed	ng/sample
7	SESL-1	09/08/01	09/19/01	<mdl< td=""></mdl<>
19	SESL-2	09/09/01	09/19/01	5.33E+01
20	SESL-2C	09/09/01	09/19/01	3.33E+01
27	SESL-3	09/10/01	09/19/01	DET
33	SESL-4	09/11/01	09/19/01	DET
39	SESL-5	09/17/01	09/21/01	4.97E+01
-51	SESL-6	09/18/01	09/21/01	4.07E+01
52	SESL-6C	09/18/01	09/21/01	2.86E+01
58	SESL-7	09/22/01	10/05/01	1.73E+02
64	SESL-8	09/23/01	10/05/01	4.76E+01
70	SESL-9	09/24/01	10/05/01	1.11E+02
79	SESL-10	09/25/01	10/05/01	7.23E+01
90	SESL-11	09/26/01	10/05/01	1.66E+02
91	SESL-11C	09/26/01	10/05/01	1.63E+02
97	SESL-12	09/27/01	10/05/01	5.82E+01
104	SESL-13	10/03/01	10/09/01	7.27E+01
115	SESL-14	10/04/01	10/09/01	4.53E+01
116	SESL-14C	10/04/01	10/09/01	4.11E+01
122	SESL-15	10/05/01	10/09/01	9.02E+01
128	SESL-16	10/06/01	10/09/01	2.10E+01
137	SESL-17	10/11/01	10/19/01	7.05E+01
148	SESL-18	10/12/01	10/19/01	1.48E+02
149	SESL-18C	10/12/01	10/19/01	1.43E+02
155	SESL-19	10/13/01	10/19/01	2.41E+02
161	SESL-20	10/14/01	10/19/01	6.63E+01
172	SESL-21	10/20/01	10/25/01	1.72E+02
173	SESL-21C	10/20/01	10/25/01	1.74E+02
179	SESL-22	10/21/01	10/25/01	4.60E+01
185	SESL-23	10/22/01	10/25/01	3.93E+01
192	SESL-24	10/23/01	10/25/01	2.10E+02
203	SESL-25	10/27/01	11/07/01	4.35E+01
204	SESL-25C	10/27/01	11/07/01	4.41E+01
213	SESL-26	10/28/01	11/07/01	5.09E+01
219	SESL-27	10/29/01	11/07/01	3.54E+01
225	SESL-28	10/30/01	11/07/01	<mdl< td=""></mdl<>
236	SESL-29	11/04/01	11/13/01	DET
237	SESL-29C	11/04/01	11/13/01	DET
244	SESL-30	11/05/01	11/13/01	DET
250	SESL-31	11/06/01	11/13/01	5.94E+01
256	SESL-32	11/07/01	11/13/01	9.89E+01

Table 4. Ambient Monitoring Results of MIC

Site: SAL

Log	Sample	Date	Date	Results:
Number	Identification	Sampled	Analyzed	ug/sample
1	SALM-1F	09/08/01	09/17/01	<mdl< td=""></mdl<>
16	SALM-2F	09/09/01	09/17/01	<mdl -<="" td=""></mdl>
18	SALM-2FC	09/09/01	09/17/01	<mdl< td=""></mdl<>
41	SALM-3F	09/10/01	09/17/01	<mdl< td=""></mdl<>
53	SALM-4F	09/11/01	09/17/01	<mdl< td=""></mdl<>
65	SALM5FB	09/17/01	09/20/01	<mdl< td=""></mdl<>
72	SALM6FB	09/18/01	09/20/01	<mdl< td=""></mdl<>
73	SALM6CFB	09/18/01	09/20/01	<mdl< td=""></mdl<>
84	SALM7FB	09/22/01	10/03/01	DET
90	SALM8FB	09/23/01	10/03/01	<mdl< td=""></mdl<>
96	SALM9FB	09/24/01	10/03/01	<mdl< td=""></mdl<>
102	SALM10FB	09/25/01	10/03/01	<mdl< td=""></mdl<>
111	SALM11FB	09/26/01	10/04/01	<mdl< td=""></mdl<>
112	SALM11CFB	09/26/01	10/04/01	<mdl< td=""></mdl<>
123	SALM12FB	09/27/01	10/04/01	<mdl< td=""></mdl<>
129	SALM13FB	10/03/01	10/10/01	<mdl< td=""></mdl<>
136	SALM14FB	10/04/01	10/10/01	<mdl< td=""></mdl<>
137	SALM14CFB	10/04/01	10/10/01	<mdl< td=""></mdl<>
148	SALM15FB	10/05/01	10/10/01	<mdl< td=""></mdl<>
154	SALM16FB	10/06/01	10/10/01	<mdl< td=""></mdl<>
160	SALM17FB	10/11/01	10/22/01	<mdl< td=""></mdl<>
169	SALM18FB	10/12/01	10/22/01	<mdl< td=""></mdl<>
170	SALM18CFB	10/12/01	10/22/01	<mdl< td=""></mdl<>
181	SALM19FB	10/13/01	10/22/01	<mdl< td=""></mdl<>
187	SALM20FB	10/14/01	10/22/01	<mdl< td=""></mdl<>
193	SALM21FB	10/20/01	10/26/01	<mdl< td=""></mdl<>
194	SALM21CFB	10/20/01	10/26/01	<mdl< td=""></mdl<>
205	SALM22FB	10/21/01	10/26/01	<mdl< td=""></mdl<>
211	SALM23FB	10/22/01	10/26/01	<mdl< td=""></mdl<>
218	SALM24FB	10/23/01	10/26/01	<mdl< td=""></mdl<>
224	SALM25FB	10/27/01	11/05/01	<mdl< td=""></mdl<>
225	SALM25CFB	10/27/01	11/05/01	<mdl< td=""></mdl<>
239	SALM26FB	10/28/01	11/05/01	<mdl< td=""></mdl<>
245	SALM27FB	10/29/01	11/05/01	<mdl< td=""></mdl<>
251	SALM28FB	10/30/01	11/05/01	<mdl< td=""></mdl<>
257	SALM29FB	11/04/01	11/14/01	<mdl< td=""></mdl<>
258	SALM29CFB	11/04/01	11/14/01	<mdl< td=""></mdl<>
269	SALM30FB	11/05/01	11/14/01	<mdl< td=""></mdl<>
276	SALM31FB	11/06/01	11/14/01	<mdl< td=""></mdl<>
282	SALM32FB	11/07/01	11/14/01	<mdl< td=""></mdl<>

Table 4. Ambient Monitoring Results of MIC

Site: CHU

Log	Sample	Date	Date	Results:
Number	Identification	Sampled	Analyzed	ug/sample
5	CHUM-1F	09/08/01	09/17/01	<mdl< td=""></mdl<>
20	CHUM-2F	09/09/01	09/17/01	<mdl< td=""></mdl<>
22	CHUM-2FC	09/09/01	09/17/01	<mdl< td=""></mdl<>
43	CHUM-3F	09/10/01	09/17/01	<mdl< td=""></mdl<>
55	CHUM-4F	09/11/01	09/17/01	<mdl< td=""></mdl<>
66	CHUM5FB	09/17/01	09/20/01	<mdl< td=""></mdl<>
74	CHUM6FB	09/18/01	09/20/01	<mdl< td=""></mdl<>
75	CHUM6CFB	09/18/01	09/20/01	<mdl< td=""></mdl<>
85	CHUM7FB	09/22/01	10/03/01	<mdl< td=""></mdl<>
91	CHUM8FB	09/23/01	10/03/01	<mdl< td=""></mdl<>
97	CHUM9FB	09/24/01	10/03/01	<mdl< td=""></mdl<>
106	CHUM10FB	09/25/01	10/03/01	<mdl< td=""></mdl<>
113	CHUM11FB	09/26/01	10/04/01	<mdl< td=""></mdl<>
114	CHUM11CFB	09/26/01	10/04/01	<mdl< td=""></mdl<>
124	CHUM12FB	09/27/01	10/04/01	<mdl< td=""></mdl<>
131	CHUM13FB	10/03/01	10/10/01	<mdl< td=""></mdl<>
138	CHUM14FB	10/04/01	10/10/01	<mdl< td=""></mdl<>
139	CHUM14CFB	10/04/01	10/10/01	<mdl< td=""></mdl<>
149	CHUM15FB	10/05/01	10/10/01	<mdl< td=""></mdl<>
155	CHUM16FB	10/06/01	10/10/01	<mdl< td=""></mdl<>
164	CHUM17FB	10/11/01	10/22/01	<mdl< td=""></mdl<>
171	CHUM18FB	10/12/01	10/22/01	<mdl< td=""></mdl<>
172	CHUM18CFB	10/12/01	10/22/01	<mdl< td=""></mdl<>
182	CHUM19FB	10/13/01	10/22/01	<mdl< td=""></mdl<>
188	CHUM20FB	10/14/01	10/22/01	<mdl< td=""></mdl<>
195	CHUM21FB	10/20/01	10/26/01	<mdl< td=""></mdl<>
196	CHUM21CFB	10/20/01	10/26/01	<mdl< td=""></mdl<>
206	CHUM22FB	10/21/01	10/26/01	<mdl< td=""></mdl<>
212	CHUM23FB	10/22/01	10/26/01	<mdl< td=""></mdl<>
219	CHUM24FB	10/23/01	10/26/01	<mdl< td=""></mdl<>
226	CHUM25FB	10/27/01	11/05/01	<mdl< td=""></mdl<>
227	CHUM25CFB	10/27/01	11/05/01	<mdl< td=""></mdl<>
240	CHUM26FB	10/28/01	11/05/01	<mdl< td=""></mdl<>
246	CHUM27FB	10/29/01	11/05/01	<mdl< td=""></mdl<>
252	CHUM28FB	10/30/01	11/05/01	<mdl< td=""></mdl<>
259	CHUM29FB	11/04/01	11/14/01	<mdl< td=""></mdl<>
260	CHUM29CFB	11/04/01	11/14/01	<mdl< td=""></mdl<>
271	CHUM30FB	11/05/01	11/14/01	<mdl< td=""></mdl<>
277	CHUM31FB	11/06/01	11/14/01	<mdl< td=""></mdl<>
283	CHUM32FB	11/07/01	11/14/01	<mdl< td=""></mdl<>

Table 4. Ambient Monitoring Results of MIC

Site: LJE

Log	Sample	Date	Date	Results:
Number	Identification	Sampled	Analyzed	ug/sample
7	LJEM-1F	09/08/01	09/17/01	<mdl< td=""></mdl<>
24	LJEM-2F	09/09/01	09/17/01	<mdl< td=""></mdl<>
26	LJEM-2FC	09/09/01	09/17/01	<mdl< td=""></mdl<>
45	LJEM-3F	09/10/01	09/17/01	<mdl< td=""></mdl<>
57	LJEM-4F	09/11/01	09/17/01	<mdl< td=""></mdl<>
67	LJEM5FB	09/17/01	09/20/01	<mdl< td=""></mdl<>
76	LJEM6FB	09/18/01	09/20/01	<mdl< td=""></mdl<>
77	LJEM6CFB	09/18/01	09/20/01	<mdl< td=""></mdl<>
86	LJEM7FB	09/22/01	10/03/01	<mdl< td=""></mdl<>
92	LJEM8FB	09/23/01	10/03/01	<mdl< td=""></mdl<>
98	LJEM9FB	09/24/01	10/03/01	<mdl< td=""></mdl<>
107	LJEM10FB	09/25/01	10/03/01	<mdl< td=""></mdl<>
115	LJEM11FB	09/26/01	10/04/01	<mdl< td=""></mdl<>
116	LJEM11CFB	09/26/01	10/04/01	<mdl< td=""></mdl<>
125	LJEM12FB	09/27/01	10/04/01	<mdl< td=""></mdl<>
132	LJEM13FB	10/03/01	10/10/01	<mdl< td=""></mdl<>
140	LJEM14FB	10/04/01	10/10/01	<mdl< td=""></mdl<>
141	LJEM14CFB	10/04/01	10/10/01	<mdl< td=""></mdl<>
150	LJEM15FB	10/05/01	10/10/01	<mdl< td=""></mdl<>
156	LJEM16FB	10/06/01	10/10/01	<mdl< td=""></mdl<>
165	LJEM17FB	10/11/01	10/22/01	<mdl< td=""></mdl<>
173	LJEM18FB	10/12/01	10/22/01	<mdl< td=""></mdl<>
174	LJEM18CFB	10/12/01	10/22/01	<mdl< td=""></mdl<>
183	LJEM19FB	10/13/01	10/22/01	<mdl< td=""></mdl<>
189	LJEM20FB	10/14/01	10/22/01	DET
197	LJEM21FB	10/20/01	10/26/01	<mdl< td=""></mdl<>
198	LJEM21CFB	10/20/01	10/26/01	<mdl< td=""></mdl<>
207	LJEM22FB	10/21/01	10/26/01	<mdl< td=""></mdl<>
213	LJEM23FB	10/22/01	10/26/01	<mdl< td=""></mdl<>
220	LJEM24FB	10/23/01	10/26/01	<mdl< td=""></mdl<>
228	LJEM25FB	10/27/01	11/05/01	<mdl< td=""></mdl<>
229	LJEM25CFB	10/27/01	11/05/01	<mdl< td=""></mdl<>
241	LJEM26FB	10/28/01	11/05/01	<mdl< td=""></mdl<>
247	LJEM27FB	10/29/01	11/05/01	<mdl< td=""></mdl<>
253	LJEM28FB	10/30/01	11/05/01	<mdl< td=""></mdl<>
261	LJEM29FB	11/04/01	11/14/01	<mdl< td=""></mdl<>
262	LJEM29CFB	11/04/01	11/14/01	<mdl< td=""></mdl<>
272	LJEM30FB	11/05/01	11/14/01	<mdl< td=""></mdl<>
278	LJEM31FB	11/06/01	11/14/01	<mdl< td=""></mdl<>
284	LJEM32FB	11/07/01	11/14/01	<mdl< td=""></mdl<>

Table 4. Ambient Monitoring Results of MIC

Site: PMS

Site: PIVIS			D . 1	D16
Log	Sample	Date	Date	Results:
Number	Identification	Sampled	Analyzed	ug/sample
9	PMSM-1F	09/08/01	09/17/01	<mdl< td=""></mdl<>
28	PMSM-2F	09/09/01	09/17/01	<mdl< td=""></mdl<>
30	PMSM-2FC	09/09/01	09/17/01	<mdl< td=""></mdl<>
47	PMSM-3F	09/10/01	09/17/01	<mdl< td=""></mdl<>
59	PMSM-4F	09/11/01	09/17/01	<mdl< td=""></mdl<>
68	PMSM5FB	09/17/01	09/20/01	<mdl< td=""></mdl<>
78	PMSM6FB	09/18/01	09/20/01	<mdl< td=""></mdl<>
79	PMSM6CFB	09/18/01	09/20/01	<mdl< td=""></mdl<>
87	PMSM7FB	09/22/01	10/03/01	<mdl< td=""></mdl<>
93	PMSM8FB	09/23/01	10/03/01	<mdl< td=""></mdl<>
99	PMSM9FB	09/24/01	10/03/01	<mdl< td=""></mdl<>
108	PMSM10FB	09/25/01	10/03/01	<mdl< td=""></mdl<>
117	PMSM11FB	09/26/01	10/04/01	<mdl< td=""></mdl<>
118	PMSM11CFB	09/26/01	10/04/01	<mdl< td=""></mdl<>
126	PMSM12FB	09/27/01	10/04/01	<mdl< td=""></mdl<>
133	PMSM13FB	10/03/01	10/10/01	<mdl< td=""></mdl<>
142	PMSM14FB	10/04/01	10/10/01	<mdl< td=""></mdl<>
. 143	PMSM14CFB	10/04/01	10/10/01	<mdl< td=""></mdl<>
151	PMSM15FB	10/05/01	10/10/01	<mdl< td=""></mdl<>
157	PMSM16FB	10/06/01	10/10/01	<mdl< td=""></mdl<>
166	PMSM17FB	10/11/01	10/22/01	<mdl< td=""></mdl<>
175	PMSM18FB	10/12/01	10/22/01	<mdl< td=""></mdl<>
176	PMSM18CFB	10/12/01	10/22/01	<mdl< td=""></mdl<>
184	PMSM19FB	10/13/01	10/22/01	<mdl< td=""></mdl<>
190	PMSM20FB	10/14/01	10/22/01	<mdl< td=""></mdl<>
199	PMSM21FB	10/20/01	10/26/01	<mdl< td=""></mdl<>
200	PMSM21CFB	10/20/01	10/26/01	<mdl< td=""></mdl<>
208	PMSM22FB	10/21/01	10/26/01	<mdl< td=""></mdl<>
214	PMSM23FB	10/22/01	10/26/01	<mdl< td=""></mdl<>
221	PMSM24FB	10/23/01	10/26/01	<mdl< td=""></mdl<>
230	PMSM25FB	10/27/01	11/05/01	<mdl< td=""></mdl<>
231	PMSM25CFB	10/27/01	11/05/01	<mdl< td=""></mdl<>
242	PMSM26FB	10/28/01	11/05/01	<mdl< td=""></mdl<>
248	PMSM27FB	10/29/01	11/05/01	<mdl< td=""></mdl<>
254	PMSM28FB	10/30/01	11/05/01	<mdl< td=""></mdl<>
263	PMSM29FB	11/04/01	11/14/01	<mdl< td=""></mdl<>
264	PMSM29CFB	11/04/01	11/14/01	<mdl< td=""></mdl<>
273	PMSM30FB	11/05/01	11/14/01	<mdl< td=""></mdl<>
279	PMSM31FB	11/06/01	11/14/01	<mdl< td=""></mdl<>
285	PMSM32FB	11/07/01	11/14/01	<mdl< td=""></mdl<>

Table 4. Ambient Monitoring Results of MIC

Site: MES

Log	Sample	Date	Date	Results:
Number	Identification	Sampled	Analyzed	ug/sample
11	MESM-1F	09/08/01	09/17/01	<mdl< td=""></mdl<>
32	MESM-2F	09/09/01	09/17/01	<mdl< td=""></mdl<>
34	MESM-2FC	09/09/01	09/17/01	<mdl< td=""></mdl<>
49	MESM-3F	09/10/01	09/17/01	<mdl< td=""></mdl<>
61	MESM-4F	09/11/01	09/17/01	<mdl< td=""></mdl<>
69	MESM5FB	09/17/01	09/20/01	<mdl< td=""></mdl<>
80	MESM6FB	09/18/01	09/20/01	<mdl< td=""></mdl<>
81	MESM6CFB	09/18/01	09/20/01	<mdl< td=""></mdl<>
88	MESM7FB	09/22/01	10/03/01	<mdl< td=""></mdl<>
94	MESM8FB	09/23/01	10/03/01	<mdl< td=""></mdl<>
100	MESM9FB	09/24/01	10/03/01	<mdl< td=""></mdl<>
109	MESM10FB	09/25/01	10/03/01	<mdl< td=""></mdl<>
119	MESM11FB	09/26/01	10/04/01	<mdl< td=""></mdl<>
120	MESM11CFB	09/26/01	10/04/01	<mdl< td=""></mdl<>
127	MESM12FB	09/27/01	10/04/01	<mdl< td=""></mdl<>
134	MESM13FB	10/03/01	10/10/01	<mdl< td=""></mdl<>
144	MESM14FB	10/04/01	10/10/01	<mdl< td=""></mdl<>
145	MESM14CFB	10/04/01	10/10/01	<mdl< td=""></mdl<>
152	MESM15FB	10/05/01	10/10/01	<mdl< td=""></mdl<>
158	MESM16FB	10/06/01	10/10/01	<mdl< td=""></mdl<>
167	MESM17FB	10/11/01	10/22/01	<mdl< td=""></mdl<>
177	MESM18FB	10/12/01	10/22/01	<mdl< td=""></mdl<>
178	MESM18CFB	10/12/01	10/22/01	<mdl< td=""></mdl<>
185	MESM19FB	10/13/01	10/22/01	<mdl< td=""></mdl<>
191	MESM20FB	10/14/01	10/22/01	DET
201	MESM21FB	10/20/01	10/26/01	<mdl< td=""></mdl<>
202	MESM21CFB	10/20/01	10/26/01	<mdl< td=""></mdl<>
209	MESM22FB	10/21/01	10/26/01	<mdl< td=""></mdl<>
215	MESM23FB	10/22/01	10/26/01	<mdl< td=""></mdl<>
222	MESM24FB	10/23/01	10/26/01	<mdl< td=""></mdl<>
232	MESM25FB	10/27/01	11/05/01	<mdl< td=""></mdl<>
233	MESM25CFB	10/27/01	11/05/01	<mdl .<="" td=""></mdl>
243	MESM26FB	10/28/01	11/05/01	<mdl< td=""></mdl<>
249	MESM27FB	10/29/01	11/05/01	<mdl< td=""></mdl<>
255	MESM28FB	10/30/01	11/05/01	<mdl< td=""></mdl<>
265	MESM29FB	11/04/01	11/14/01	<mdl< td=""></mdl<>
266	MESM29CFB	11/04/01	11/14/01	<mdl< td=""></mdl<>
274	MESM30FB	11/05/01	11/14/01	<mdl< td=""></mdl<>
280	MESM31FB	11/06/01	11/14/01	<mdl< td=""></mdl<>
286	MESM32FB	11/07/01	11/14/01	<mdl< td=""></mdl<>

Table 4. Ambient Monitoring Results of MIC

Site: SES

Log	Sample	Date	Date	Results:
Number	Identification	Sampled	Analyzed	ug/sample
13	SESM-1F	09/08/01	09/17/01	<mdl< td=""></mdl<>
36	SESM-2F	09/09/01	09/17/01	<mdl< td=""></mdl<>
38	SESM-2FC	09/09/01	09/17/01	<mdl< td=""></mdl<>
51	SESM-3F	09/10/01	09/17/01	<mdl< td=""></mdl<>
63	SESM-4F	09/11/01	09/17/01	<mdl< td=""></mdl<>
70	SESM5FB	09/17/01	09/20/01	<mdl< td=""></mdl<>
82	SESM6FB	09/18/01	09/20/01	<mdl< td=""></mdl<>
83	SESM6CFB	09/18/01	09/20/01	<mdl< td=""></mdl<>
89	SESM7FB	09/22/01	10/03/01	<mdl< td=""></mdl<>
95	SESM8FB	09/23/01	10/03/01	<mdl< td=""></mdl<>
101	SESM9FB	09/24/01	10/03/01	<mdl< td=""></mdl<>
110	SESM10FB	09/25/01	10/03/01	<mdl< td=""></mdl<>
121	SESM11FB	09/26/01	10/04/01	<mdl< td=""></mdl<>
122	SESM11CFB	09/26/01	10/04/01	<mdl< td=""></mdl<>
128	SESM12FB	09/27/01	10/04/01	<mdl< td=""></mdl<>
135	SESM13FB	10/03/01	10/10/01	<mdl< td=""></mdl<>
146	SESM14FB	10/04/01	10/10/01	<mdl< td=""></mdl<>
147	SESM14CFB	10/04/01	10/10/01	<mdl< td=""></mdl<>
153	SESM15FB	10/05/01	10/10/01	<mdl< td=""></mdl<>
159	SESM16FB	10/06/01	10/10/01	<mdl< td=""></mdl<>
168	SESM17FB	10/11/01	10/22/01	<mdl< td=""></mdl<>
179	SESM18FB	10/12/01	10/22/01	<mdl< td=""></mdl<>
180	SESM18CFB	10/12/01	10/22/01	<mdl.< td=""></mdl.<>
186	SESM19FB	10/13/01	10/22/01	<mdl< td=""></mdl<>
192	SESM20FB	10/14/01	10/22/01	DET
203	SESM21FB	10/20/01	10/26/01	<mdl< td=""></mdl<>
204	SESM21CFB	10/20/01	10/26/01	<mdl< td=""></mdl<>
210	SESM22FB	10/21/01	10/26/01	<mdl< td=""></mdl<>
216	SESM23FB	10/22/01	10/26/01	<mdl< td=""></mdl<>
223	SESM24FB	10/23/01	10/26/01	<mdl< td=""></mdl<>
234	SESM25FB	10/27/01	11/05/01	<mdl< td=""></mdl<>
235	SESM25CFB	10/27/01	11/05/01	<mdl< td=""></mdl<>
244	SESM26FB	10/28/01	11/05/01	<mdl< td=""></mdl<>
250	SESM27FB	10/29/01	11/05/01	<mdl< td=""></mdl<>
256	SESM28FB	10/30/01	11/05/01	<mdl< td=""></mdl<>
267	SESM29FB	11/04/01	11/14/01	<mdl< td=""></mdl<>
268	SESM29CFB	11/04/01	11/14/01	<mdl< td=""></mdl<>
275	SESM30FB	11/05/01	11/14/01	<mdl< td=""></mdl<>
281	SESM31FB	11/06/01	11/14/01	<mdl< td=""></mdl<>
287	SESM32FB	11/07/01	11/14/01	<mdl< td=""></mdl<>

Ambient Monitoring Notes

If analysis result is \geq MDL and < EQL it is reported in the table as detected (DET). Levels \geq EQL are reported as the actual measured value and are reported to three significant figures.

Site location i.d.:

SAL: APCD monitoring site in Salinas

CHU: Chualar School

LJE: La Joya Elementary School

PMS: Pajaro Middle School

MES: Mac Quiddy Elementary School SES: Salsipuedes Elementary School

C: Represents the collocated site
T: Represents the charcoal cartridges
L: Represents the XAD-4 cartridges
M: Represents the XAD-7 cartridges

Table 5: Laboratory Spiking Solutions Results

Spiking So	Spiking Solution: 80 ng/ml total DC		ni total DCP 4 ug/ml			40 ng/ml			0.20 ug/m			
Date	cDCP	%Rec.	tDCP	%Rec.	MITC	%Rec.	Date	TC NM	%Rec.	Date	МІС	%Rec.
9/14 9/25 10/1 10/12 10/16 10/29 11/1	23.90 36.49 37.56 30.39 31.66 31.82 37.30 34.97	59.75 91.23 93.90 75.98 79.15 79.55 93.25 87.43	25.51 36.26 37.69 30.53 32.84 31.67 37.31 34.58	63.78 90.65 94.23 76.33 82.10 79.18 93.28 86.45	3.17 3.35 3.55 3.04 3.11 3.10 3.42 3.51	79.25 83.75 88.75 76.00 77.75 77.50 85.50 87.75	9/20 9/21 10/5 10/9 10/19 10/25 11/7 11/13	27.55 27.71 31.40 30.89 34.02 31.70 32.07 32.07	68.88 69.28 78.50 77.23 85.05 79.25 80.18 80.03	9/17 9/20 10/3 10/4 10/10 10/22 10/29 11/5 11/14	0.30 0.27 0.27 0.28 0.24 0.30 0.19 0.24 0.13	148.00 136.00 133.00 140.50 121.50 150.00 96.50 117.50 66.00
Average Std Dev	33.01 4.60	82.53 11.50	33.30 4.09	83.25 10.22	3.28 0.20	82.03 5.01		30.92 2.22	77.30 5.56		0.25 0.04	123.22 17.84

Table 6: Laboratory Method Blank Results

Date	cDCP	tDCP	MITC	Date	TC NM	Date	MIC
9/14 9/25 10/1 10/12 10/16 10/29 11/1	<mdl <mdl="" <mdl<="" th=""><th><mdl <mdl="" <mdl<="" th=""><th><mdl <mdl="" <mdl<="" th=""><th>9/20 9/21 10/5 10/9 10/19 10/25 11/7</th><th><mdl <mdl="" <mdl<="" th=""><th>9/17 9/20 10/3 10/4 10/10 10/22 10/29 11/5</th><th><mdl <mdl="" <mdl<="" th=""></mdl></th></mdl></th></mdl></th></mdl></th></mdl>	<mdl <mdl="" <mdl<="" th=""><th><mdl <mdl="" <mdl<="" th=""><th>9/20 9/21 10/5 10/9 10/19 10/25 11/7</th><th><mdl <mdl="" <mdl<="" th=""><th>9/17 9/20 10/3 10/4 10/10 10/22 10/29 11/5</th><th><mdl <mdl="" <mdl<="" th=""></mdl></th></mdl></th></mdl></th></mdl>	<mdl <mdl="" <mdl<="" th=""><th>9/20 9/21 10/5 10/9 10/19 10/25 11/7</th><th><mdl <mdl="" <mdl<="" th=""><th>9/17 9/20 10/3 10/4 10/10 10/22 10/29 11/5</th><th><mdl <mdl="" <mdl<="" th=""></mdl></th></mdl></th></mdl>	9/20 9/21 10/5 10/9 10/19 10/25 11/7	<mdl <mdl="" <mdl<="" th=""><th>9/17 9/20 10/3 10/4 10/10 10/22 10/29 11/5</th><th><mdl <mdl="" <mdl<="" th=""></mdl></th></mdl>	9/17 9/20 10/3 10/4 10/10 10/22 10/29 11/5	<mdl <mdl="" <mdl<="" th=""></mdl>

Table 7: Laboratory Control Sample Results

Cartridge S	spikes:	80 ng/mi t	otal DCP		4 ug/ml		40 ng/ml			0.20		
] 					ug/ml		
Date	cDCP	%Rec.	tDCP	%Rec.	MITC	%Rec.	Date	TC NM	%Rec.	Date	MIC	%Rec.
9/14	24.72	61.80	25.35	63.38	2.16	54.00	9/20	26.61	66.53	9/17	0.29	146.00
9/25	30.45	76.13	30.34	75.85	2.54	63.50	9/21	28.98	72.45	9/20	0.28	137.50
10/1	32.33	80.83	32.57	81.43	2.33	58.25	10/5	35.77	89.43	10/3	0.25	124.50
10/12	28.93	72.33	29.22	73.05	1.97	49.25	10/9	28.04	70.10	10/4	0.26	130.50
10/16	29.05	72.63	29.04	72.60	2.16	54.00	10/19	37.54	93.85	10/10	0.25	123.50
10/29	31.54	78.85	31.82	79.55	2.28	57.00	10/25	35.05	87.63	10/22	0.28	139.50
11/1	29.73	74.33	29.38	73.45	2.15	53.75	11/7	37.55	93.88	10/29	0.23	115.50
11/15	29.06	72.65	28.41	71.03	2.39	59.75	11/13	33.88	84.70	11/5	0.25	122.50
										11/14	0.17	84.50
Average	29.48	73.69	29.52	73.79	2.25	56.19		32.93	82.32		0.25	124.89
Std Dev	2.29	5.72	2.21	5.53	0.18	4.39		4.40	11.00		0.02	10.29

Table 8: Field Spikes

Data	Sample ID		cDCP		tDCP		MITC		
Date	Sample ID	Log	40 ng/ml %Recovery		40 ng/ml %Recovery		4 ug/ml	%Recovery	
10/16	SALT-1FS SALT-10FS SALT-17FS SALT-26FS	132	23.78 33.20 29.58 35.60	59.45 83.00 73.95 89.00	30.38 49.00 26.40 32.50	75.95 122.50 66.00 81.25	2.06 2.21 2.27 2.02	55.25 56.75	sub SALT1#1 sub SALT10#71 subSALT17#129 subSALT26#208
		Average Std Dev	30.54 5.14	76.35 12.85	34.57 9.95	86.43 24.87	2.14 0.12	53.50 2.98	

Date	Sample ID	Log	TCNM 40 ng/ml	%Recovery	
9/20 10/5 10/19 11/7	SALL-1FS SALL-10FS SALL-17FS SALL-26FS	2 72 132 207	40.55 37.74 39.43 33.70	101.38 94.35 98.58 84.25	subSALL1#1 subSALL10#71 subSALL17#129 subSALL26#208
		Average Std Dev	37.86 3.00	94.64 7.50	

•	:		MIC	
Date	Sample ID	Log	0.2 ug/ml	%Recovery
9/17	SALM-1FSF	3	0.29	146.00
10/3	SALM10FSFB	103	0.28	140.50
10/22	SALM17FS	163	0.27	135.50
11/5	SALM26FS	238	0.26	131.00
		Average	0.28	138.25
		Std Dev	0.01	6.46

Table 9: Trip Spikes

Date	Sample ID	Log	cDCP	%Recovery	tDCP	%Recovery	MITC	%Recovery
9/14	SEST-1TS	21	25.14	62.85	26.23	65.58	2.03	50.75
10/1	SALT-10TS	73	33.81	84.53	33.92	84.80	2.33	58.25
10/16	SALT-17TS	130	30.33	75.83	30.33	75.83	2.27	56.75
11/1	SALT-26TS	206	34.42	86.05	34.03	85.08	2.23	55.75
		Average	30.93	77.31	31.13	77.82	2.22	55.38
		Std Dev	4.26	10.64	3.69	9.22	0.13	3.25

Date	Sample ID	Log	TC NM	%Recovery
9/20 10/5 10/19	SESL-1TS SALL-10TS SALL-17TS	21 73 130	34.78 36.16 35.92	86.95 90.40 89.80
11/7	SALL-26TS	206	35.56	88.90
		Average	35.61	89.01
	<u> </u>	Std Dev	0.60	1.51

Date	Sample ID	Log	MIC	%Recovery
9/17	SESM-2TS	40	0.31	156.00
10/3	SALM10TS	104	0.29	144.00
10/22	SALM17TS	161	0.27	137.00
11/5	SALM26TS	237	0.25	125.50
		Average	0.28	140.63
	l	Std Dev	0.03	12.78

Table 10: Laboratory Spikes

Date	cDCP	%Rec.	tDCP	%Rec.	MITC	%Rec.	Date	TC NM	%Rec.	Date	MIC	%Rec.
9/14 10/1 10/16 11/1	32.49 35.69 31.78 33.36	81.23 89.23 79.45 83.40	32.31 34.82 32.30 33.26	80.78 87.05 80.75 83.15	1.96 2.36 2.10 2.49	49.00 59.00 52.50 62.25	9/20 10/5 10/19 11/7	32.34 31.40 38.99 19.12	80.85 78.50 97.48 47.80**	9/17 10/3 10/22 11/5	0.32 0.29 0.32 0.25	160.00 143.50 161.50 122.50
Average Std Dev	33.33 1.70	83.33 4.25	33.17 1.19	82.93 2.97	2.23 0.24	55.69 6.03		30.46 8.28	85.61 10.34		0.29 0.04	146.88 18.18

 $80 \text{ ng/ml DCP}(40 \text{ ng/ml each isomer}) \text{ and } 4.0 \text{ }\mu\text{g/ml MITC}$ 40.0 ng/ml TCNM

^{0.12} μg/ml MIC

^{**} Poor spike/sample loss, this value is not included in the average percent recovery.

Table 11: Trip Blanks

Date	Sample ID	Log	cDCP	tDCP	MITC	Date	Sample ID	Log	TC NM	Date	Sample ID	Log	MIC
	•												
9/14	SALT-1TB	8	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td>9/20</td><td>SALL-1TB</td><td>8</td><td><mdl< td=""><td>9/17</td><td>SALM-1TB</td><td>15</td><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td>9/20</td><td>SALL-1TB</td><td>8</td><td><mdl< td=""><td>9/17</td><td>SALM-1TB</td><td>15</td><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td>9/20</td><td>SALL-1TB</td><td>8</td><td><mdl< td=""><td>9/17</td><td>SALM-1TB</td><td>15</td><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	9/20	SALL-1TB	8	<mdl< td=""><td>9/17</td><td>SALM-1TB</td><td>15</td><td><mdl< td=""></mdl<></td></mdl<>	9/17	SALM-1TB	15	<mdl< td=""></mdl<>
9/25	SALT-5TB	40	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td>9/21</td><td>SALL-5TB</td><td>40</td><td><mdl< td=""><td>9/20</td><td>SALM5TB</td><td>71</td><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td>9/21</td><td>SALL-5TB</td><td>40</td><td><mdl< td=""><td>9/20</td><td>SALM5TB</td><td>71</td><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td>9/21</td><td>SALL-5TB</td><td>40</td><td><mdl< td=""><td>9/20</td><td>SALM5TB</td><td>71</td><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	9/21	SALL-5TB	40	<mdl< td=""><td>9/20</td><td>SALM5TB</td><td>71</td><td><mdl< td=""></mdl<></td></mdl<>	9/20	SALM5TB	71	<mdl< td=""></mdl<>
10/1	SALT-10TB	74	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td>10/5</td><td>SALL-10TB</td><td>74</td><td><mdl< td=""><td>10/3</td><td>SALM10TB</td><td>105</td><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td>10/5</td><td>SALL-10TB</td><td>74</td><td><mdl< td=""><td>10/3</td><td>SALM10TB</td><td>105</td><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td>10/5</td><td>SALL-10TB</td><td>74</td><td><mdl< td=""><td>10/3</td><td>SALM10TB</td><td>105</td><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	10/5	SALL-10TB	74	<mdl< td=""><td>10/3</td><td>SALM10TB</td><td>105</td><td><mdl< td=""></mdl<></td></mdl<>	10/3	SALM10TB	105	<mdl< td=""></mdl<>
10/12	SALT-13TB	99	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td>10/9</td><td>SALL-13TB</td><td>99</td><td><mdl< td=""><td>10/10</td><td>SALM13TB</td><td>130</td><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td>10/9</td><td>SALL-13TB</td><td>99</td><td><mdl< td=""><td>10/10</td><td>SALM13TB</td><td>130</td><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td>10/9</td><td>SALL-13TB</td><td>99</td><td><mdl< td=""><td>10/10</td><td>SALM13TB</td><td>130</td><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	10/9	SALL-13TB	99	<mdl< td=""><td>10/10</td><td>SALM13TB</td><td>130</td><td><mdl< td=""></mdl<></td></mdl<>	10/10	SALM13TB	130	<mdl< td=""></mdl<>
10/16	SALT-17TB	131	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td>10/19</td><td>SALL-17TB</td><td>131</td><td><mdl< td=""><td>10/22</td><td>SALM17TB</td><td>162</td><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td>10/19</td><td>SALL-17TB</td><td>131</td><td><mdl< td=""><td>10/22</td><td>SALM17TB</td><td>162</td><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td>10/19</td><td>SALL-17TB</td><td>131</td><td><mdl< td=""><td>10/22</td><td>SALM17TB</td><td>162</td><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	10/19	SALL-17TB	131	<mdl< td=""><td>10/22</td><td>SALM17TB</td><td>162</td><td><mdl< td=""></mdl<></td></mdl<>	10/22	SALM17TB	162	<mdl< td=""></mdl<>
10/29	SALT-24TB	186	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td>10/25</td><td>SALL-24TB</td><td>186</td><td><mdl< td=""><td>10/29</td><td>SALM24TB</td><td>217</td><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td>10/25</td><td>SALL-24TB</td><td>186</td><td><mdl< td=""><td>10/29</td><td>SALM24TB</td><td>217</td><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td>10/25</td><td>SALL-24TB</td><td>186</td><td><mdl< td=""><td>10/29</td><td>SALM24TB</td><td>217</td><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	10/25	SALL-24TB	186	<mdl< td=""><td>10/29</td><td>SALM24TB</td><td>217</td><td><mdl< td=""></mdl<></td></mdl<>	10/29	SALM24TB	217	<mdl< td=""></mdl<>
11/1	SALT-26TB	205	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td>11/7</td><td>SALL-26TB</td><td>205</td><td><mdl< td=""><td>11/5</td><td>SALM26TB</td><td>236</td><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td>11/7</td><td>SALL-26TB</td><td>205</td><td><mdl< td=""><td>11/5</td><td>SALM26TB</td><td>236</td><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td>11/7</td><td>SALL-26TB</td><td>205</td><td><mdl< td=""><td>11/5</td><td>SALM26TB</td><td>236</td><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	11/7	SALL-26TB	205	<mdl< td=""><td>11/5</td><td>SALM26TB</td><td>236</td><td><mdl< td=""></mdl<></td></mdl<>	11/5	SALM26TB	236	<mdl< td=""></mdl<>
11/15	SALT-30TB	239	<mdl< td=""><td><mdl< td=""><td><mdl \<="" td=""><td>11/13</td><td>SALL-30TB</td><td>239</td><td><mdl< td=""><td>11/14</td><td>SALM30TB</td><td>270</td><td><mdl< td=""></mdl<></td></mdl<></td></mdl></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl \<="" td=""><td>11/13</td><td>SALL-30TB</td><td>239</td><td><mdl< td=""><td>11/14</td><td>SALM30TB</td><td>270</td><td><mdl< td=""></mdl<></td></mdl<></td></mdl></td></mdl<>	<mdl \<="" td=""><td>11/13</td><td>SALL-30TB</td><td>239</td><td><mdl< td=""><td>11/14</td><td>SALM30TB</td><td>270</td><td><mdl< td=""></mdl<></td></mdl<></td></mdl>	11/13	SALL-30TB	239	<mdl< td=""><td>11/14</td><td>SALM30TB</td><td>270</td><td><mdl< td=""></mdl<></td></mdl<>	11/14	SALM30TB	270	<mdl< td=""></mdl<>

Appendix A:

Standard Operating Procedure for DCP and MITC Analysis

California Environmental Protection Agency

Air Resources Board

Standard Operating Procedure
Sampling and Analysis of 1,3-dichloropropene (Telone)
and Methyl Isothiocyanate (MITC) in Application and
Ambient Air using Gas Chromatography/Mass Selective
Detector

Special Analysis Section Northern Laboratory Branch Monitoring and Laboratory Division

06/25/01 version

Approved by:

Russell Grace, Manager Special Analysis Section

1. SCOPE

The method uses resin tubes and a gas chromatograph/mass selective detector for the determination of 1,3- dichloropropene (Telone) and methyl isothiocyanate (MITC), one of the breakdown products of Metam-Sodium, for application and ambient air sample analysis. The Department of Pesticide Regulation (DPR) asked the Air Resources Board (ARB) to do ambient and application monitoring of Telone and MITC at a requested quantitation limit of 0.5 µg/m³ for MITC.

2. SUMMARY OF METHOD

Coconut based charcoal tubes are placed on the sampler for 24 hours at 3.0 liters per minute (LPM) flow rate. The samples are stored in an ice chest or refrigerator until extracted with 3 ml of dichloromethane (DCM). The injection volume is 1 μ l. A gas chromatograph with a mass selective detector in the selected ion monitoring (SIM) mode is used for analysis.

3. INTERFERENCES/LIMITATIONS

The primary interference encountered with the previous method was the presence of the MITC near the cis-DCP. The retention time difference is only about 0.05 minutes and even operating in SIM mode, similar ions are detected by the instrument. This makes it difficult to accurately quantitate if both cis-DCP and MITC are present. The installation of a different column than that used in the previous method resolved the issue and easily separates the target compounds. As with any method, additional interferences may be caused by contaminants in solvents, reagents, glassware and other processing apparatus that can lead to discrete artifacts or elevated baselines. Method blanks, both solvent and resin, must be run concurrently with each batch of samples to detect any possible interferences.

4. EQUIPMENT AND CONDITIONS

C. Instrumentation:

Hewlett-Packard 6890 Series gas chromatograph Hewlett-Packard 5973 Network mass selective detector Hewlett-Packard 6890 Enhanced Parameters ALS

MS Transfer line: 280°C

Injector: 210 °C, Splitless, Liner 4 mm straight liner with glass wool. Column: Restek Rtx-200, 60 meter, 320 μm i.d., 1.5 μm film thickness.

GC Temperature Program: Oven initial 40 °C, hold 4 min. Ramp to 220 °C @ 12 °C/min., hold 1 min., ramp to 240 °C @ 20 °C/min., hold 2.0 min. Retention time: cis-DCP= 11.63 min., trans-DCP= 12.10 min., MITC=12.23 min.

Splitter open @ 1.0 min.

Flows: Column: He, 1.6 ml/min, 9.1psi. (velocity: 32cm/sec)

Splitter: 50 ml/min.

Mass Spectrometer: Electron Ionization

Selective Ion Monitoring: dichloropropene: 75 (quant. Ion 100%), 110 (qual. Ion 30%); methyl isothiocyanate: 73 (quant. Ion 100%), 72 (qual. Ion 46%). Tuning: PFTBA on masses 69, 219, 502.

C. Auxiliary Apparatus

- 1. Precleaned vials, 8 ml capacity with teflon caps.
- 2. Whatman filters, 0.45 μm
- 3. Disposable syringes, 3 ml
- 4. Sonicator
- 5. GC vials with septum caps.
- C. Reagants
- 1. Dichloromethane, Pesticide grade or better.
- 2. 1,3 –Dichloropropene (cis- and trans- mixture), Chem Service PS- 1 52, 99 (+) % or equiv.
- 3. Methyl Isothiocyanate, Chem Service MET-221A, 99.5%
- 4. Coconut charcoal sorbent tubes, SKC, Fullerton, CA #226-09.

5. ANALYSIS OF SAMPLES

- 1. A daily manual tune shall be performed using PFTBA. The instrument is tuned using masses: 69, 219, 502. The criterion for the tune are the peak widths at ½ the peak height, 0.60 ± 0.05, and the criteria for relative abundance: 69:100%, 219:100-120%, and 502: 7-12%.
- 2. It is necessary to analyze a solvent blank with each batch of samples. The blank must be free of interferences. A solvent blank must be analyzed after any sample which may result in possible carry-over contamination.
- A 5-point calibration curve shall be analyzed with each batch of samples. For dichloropropene the analysis is calibrated at 10, 20, 40, 60, 100 ng/ml cis and trans. For methyl isothiocyanate the calibration is at 0.5, 1.0, 2.0, 3.0, 5.0 μg/ml.
- 4. With each batch of samples analyzed, a laboratory blank and a laboratory control spike will be run concurrently. A laboratory blank is an unexposed charcoal tube prepared and analyzed the same way the field samples are

analyzed. A laboratory control spike is a charcoal tube spiked with a known amount of standard. The control sample is prepared and analyzed the same way as the field samples. Laboratory check samples should have recoveries that are at least 70% of the theoretical spiked value.

- 5. A DCP calibration check sample of 10 ng/ml is run after the calibration and every 10 samples and at the end of each sample batch. The calibration check for MITC is 0.75 μg/ml. The value of the check must be within ±3σ (the standard deviation) or ±10% of the expected value, whichever is greater. If the calibration check is outside the limit, then those samples in the batch after the last calibration check that was within the limit need to be reanalyzed.
- Score and snap the sample tube, transfer the charcoal into a 8 ml vial. (Save the back-up bed for future analysis if necessary.) Rinse the tube with 3.0 ml of DCM into the extraction vial. Cap and place the vial in the sonicator for 1 hour.
- 7. Filter the samples using a 3 ml syringe and 0.45 μ m filter directly into a GC vial and cap securely.
- 8. The atmospheric concentration is calculated according to:

Conc (ng/m³) = Extract Conc (ng/ml) X 3 ml / Air Volume Sampled (m³)

6. QUALITY ASSURANCE

A. Instrument Reproducibility

The reproducibility of the instrument and analytical method was established by analyzing five(5) 1.0 μ l injections of dichloropropene and methyl isothiocyanate standard at three concentrations (low, mid, and high range). The low, mid and high concentrations of dichloropropene were 10, 40 and 100 ng/ml, respectively. The low, mid and high concentrations of methyl isothiocyanate were 0.5, 2.0 and 5.0 μ g/ml, respectively.

B. Calibration

The five-point calibration curve is constructed for each compound using linear regression analysis. A curve cannot be used if its correlation coefficient is less than 0.995.

C. Calibration Check

A calibration check control is run after the calibration and every 10 samples and at the end of the sample batch to verify the system is in calibration. The value of

the check must be within $\pm 3\sigma$ (the standard deviation) or $\pm 10\%$ of the expected value, whichever is greater. If the calibration check is outside the limit, then those samples preceding the out of limit check need to be reanalyzed.

D. Minimum Detection Limit

Detection limits are based on US EPA MDL calculation. Using the analysis of seven (7) replicates of a low-level matrix spike, the method detection limit (MDL) and the estimated quantitation limit (EQL) for 1,3-dichloropropene is calculated by: MDL = 3.14*(std dev values), where std dev = the standard deviation of the concentration calculated for the seven replicate spikes. For dichloropropene, the MDL is 2.0 ng/ml for each isomer. EQL, defined as 5*MDL, is 10 ng/ml based on a 3 ml extraction volume. For methyl isothiocyanate, the MDL is 0.04 μ g/ml with an EQL of 0.22 μ g/ml. Results above the EQL are reported to 3 significant figures. Results below EQL but above the MDL are reported as DET (detected) and results less than the MDL are ND (nondetect).

E. Collection and Extraction Efficiency (Recovery)

The target compounds at a low and high level are spiked on charcoal tubes (3 at each concentration). The spiked tubes are placed on field samplers with airflows of 3 LPM for 24 hours. The samples are extracted with DCM and prepared as described in section 5, #6-7. The average percent recovery should be \pm 20% of the expected value. Normal recoveries for DCP were found to be greater than 90%. Normal recoveries for MITC are greater than 85%.

F. Storage Stability

Storage stability studies were completed in the previous analysis and not continued further here. All analyses are to be completed within 4 days of receipt.

G. Breakthrough

No breakthrough analysis was done for DCP. The breakthrough was checked for MITC since the field sampling flow rate was set to 3 LPM. The recovery of charcoal tubes spiked at 5.0 $\mu g/ml$ was greater than 85% with no MITC detected in the secondary beds.

H. Safety

This procedure does not address all of the safety concerns associated with chemical analysis. It is the responsibility of the analyst to establish appropriate safety and health practices. For hazard information and guidance refer to the material safety data sheets (MSDS) of any chemicals used in this procedure.

Appendix B:

Standard Operating Procedure for TCNM Analysis

California Environmental Protection Agency

Air Resources Board

Standard Operating Procedure
Sampling and Analysis of Trichloronitromethane
(Chloropicrin) in Application and Ambient Air using Gas
Chromatography/Mass Selective Detector

Special Analysis Section Northern Laboratory Branch Monitoring and Laboratory Division

06/25/01 version

Approved by:

Russell Grace, Manager Special Analysis Section

SCOPE

The current method is for the analysis of trichloronitromethane (TCNM) using a gas chromatograph/mass selective detector. The procedure is for the analysis of application and ambient air monitoring of TCNM using XAD-4 resin tubes. The Department of Pesticide Regulation (DPR) asked the Air Resources Board (ARB) to analyze for TCNM during agricultural/structural application with a requested quantitation limit of 1.0 μg/m³ and ambient monitoring with a quantitation limit of 0.1 μg/m³.

SUMMARY OF METHOD

Resin tubes, XAD-4, are placed on the sampler for 24 hours at a flowrate of 0.1 liters per minute (LPM or 100 mLPM). The samples are stored in an ice chest or refrigerator until extracted with 3 ml of dichloromethane (DCM). The injection volume is 1 μ l. A gas chromatograph with a mass selective detector in the selected ion monitoring (SIM) mode is used for analysis.

3. INTERFERENCES/LIMITATIONS

Interferences may be caused by contaminants in solvents, reagents, glassware and other processing apparatus that can lead to discrete artifacts or elevated baselines. A method blank, including both solvent and resin, must be analyzed with each batch of samples to detect any possible interferences.

4. EQUIPMENT AND CONDITIONS

A. Instrumentation:

Hewlett-Packard 6890 Series gas chromatograph Hewlett-Packard 5973 Network mass selective detector Hewlett-Packard 6890 Enhanced Parameters ALS

MS Transfer line: 280°C

Injector: 210°C, Splitless, Liner 4 mm straight liner with glass wool. Column: Restek Rtx-200, 60 meter, 320 μm i.d., 1.5 μm film thickness.

GC Temperature Program: Oven initial 40°C, hold 4 min. Ramp to 220°C @

12°C/min., hold 1 min., ramp to 240°C @ 20°C/min., hold 2.0 min.

Retention time: TCNM 11.93 min.

Splitter open @ 1.0 min.

Flows: Column: He, 1.6 ml/min, 9.1psi. (velocity: 32cm/sec)

Splitter: 50 ml/min.

Mass Spectrometer: Electron Ionization

Selective Ion Monitoring: trichloronitromethane: 117 (quant. ion 100%), 119 (qual. ion 98%); Tuning: PFTBA on masses 69, 219, 502.

B. Auxiliary Apparatus

- 1 Precleaned vials, 8 ml capacity with teflon caps.
- 2 Whatman filters, 0.45 μm
- 3 Disposable syringes, 3 ml
- 4 Sonicator
- 5 GC vials with septum caps.

C. Reagants

- 1 Dichloromethane, Pesticide grade or better.
- 2 Trichloronitromethane, Chem Service PS-4, 98.8%
- 3 XAD-4 resin sorbent tubes, 400/200mg. SKC, Fullerton, CA.

5. ANALYSIS OF SAMPLES

- A daily manual tune shall be performed using PFTBA. The instrument is tuned using masses: 69, 219, 502. The criterion for the tune are the peak widths at ½ the peak height, 0.60 ± 0.05, and the criteria for relative abundance; 69:100%, 219:100-120%, and 502: 7-12%.
- 2 It is necessary to analyze a solvent blank with each batch of samples. The blank must be free of interferences. A solvent blank must be analyzed after any sample which may result in possible carry-over contamination.
- 3 A 5-point calibration curve shall be analyzed with each batch of samples. For the ambient studies the calibration will be 0.5-50.0 ng/mL and for the application studies 50.0-500 ng/mL.
- 4 A calibration check sample of 7.5 ng/ml is run after the calibration and every 10 samples and at the end of the sample batch. The value of the calibration check must be within ±3σ (the standard deviation) or ±10% of the expected value whichever is greater. If the calibration check is outside this limit, then those samples in the batch after the last calibration check that was within limits need to be reanalyzed.
- With each batch of samples analyzed, a laboratory blank and a laboratory control spike will be run concurrently. A laboratory blank is XAD-4 extracted and analyzed the same way as the samples. A laboratory control spike is XAD-4 spiked with a known amount of standard. The laboratory control sample is extracted and analyzed the same way as the samples. Laboratory

control samples should have recoveries that are greater than or equal to 70% of the theoretical spiked value.

- Score and snap the sample resin tube, transfer the front bed of the resin tube into a 8 ml vial. (Save the back-up bed for future analysis if necessary.)

 Rinse the tube with 3.0 ml of DCM into the extraction vial. Cap and place the vial in the sonicator for 1 hour.
- 7 Filter the samples using 0.45 μm filter attached to a 3 ml syringe directly into a GC vial and cap securely.
- 8 The atmospheric concentration is calculated according to:

Conc (ng/m³) = Extract Conc (ng/ml) X 3 ml / Air Volume Sampled (m³)

6. QUALITY ASSURANCE

A. Instrument Reproducibility

The reproducibility of the instrument and analytical method was established by analyzing five (5) 1.0 μ l injections of trichloronitromethane standard at three concentrations (low, mid, and high). The low, mid and high concentrations were 5, 20 and 50 ng/ml, respectively.

B. Calibration

A five-point calibration curve is made ranging from 5.0 ng/ml to 50.0 ng/ml for ambient and 50 ng/ml to 500 ng/ml for application.

C. Calibration Check

A calibration check sample is run after the calibration, after every 10 samples and at the end of the sample batch to verify the system is in calibration. The value of the check must be within $\pm 3\sigma$ (the standard deviation) or $\pm 10\%$ of the expected value whichever is larger. If the calibration check is outside the limit, then those samples in the batch after the last calibration check that was within the limit need to be reanalyzed.

D. Minimum Detection Limit

The detection limit is based on US EPA MDL calculation. Using the analysis of seven (7) replicates of a low-level matrix spike, the method detection limit (MDL) and the estimated quantitation limit (EQL) for trichloronitromethane is calculated by: MDL = 3.14*(std dev values) where std dev = the standard deviation of the concentration calculated for the seven replicate spikes. For TCNM the MDL is 3.96 ng/sample (1.32 ng/mL). EQL, defined as 5*MDL, is 19.8 ng/sample (6.60

ng/mL) based on a 3 ml extraction volume. Results 4are reported to 3 significant figures. Results below EQL but above the MDL are reported as DET (detected) and results less than the MDL are reported as ND (nondetect).

E. Collection and Extraction Efficiency (Recovery)

Trichloronitromethane at a low and high level are spiked on XAD-4 tubes (3 at each concentration). The spiked tubes are placed on field samplers with airflows of 100 mLpm for 24 hours. The samples are extracted with DCM and prepared as described in section 5, #6-7. The average percent recovery of trichloronitromethane should be ± 20% of the expected value. The recoveries both for the low and high levels are greater than 80.0%.

F. Storage Stability

Storage stability was set up for a 4-week study. Three (3) XAD-4 tubes each were spiked at the low and high-end concentrations. The tubes were stored in the freezer until analyzed. At the low-end concentrations (5 ng/ml), the recovery for the three spikes averaged 106.8 percent, ranging from 103.68 to 113.68 percent. The average percent recovery peaked after fourteen days and was at the lowest after 28 days. At the high end (50 ng/ml), the recovery for the three spikes averaged 90.237 percent, ranging from 88.904 to 91.996 percent. The average percent recovery peaked at 14 days and was at the lowest at 20 days.

H. Breakthrough

The previous analysis of trichloronitromethane (ARB #A5-169-43) was for 4 hour sampling at 1.0 LPM in September/October, 1986. The current study for ambient monitoring for 24 hours will require a low sample flow rate to meet the requested EQL. A breakthrough analysis study was conducted. The flow rates tested were 1.0, 0.5, 0.2 and 0.1 Lpm. To meet the EQL and minimize breakthrough possibility, the flow rate for the field sampling will be at 100 mLpm.

H. Safety

This procedure does not address all of the safety concerns associated with chemical analysis. It is the responsibility of the analyst to establish appropriate safety and health practices. For hazard information and guidance refer to the material safety data sheets (MSDS) of any chemicals used in this procedure.

Appendix C:

Standard Operating Procedure for MIC Analysis

California Environmental Protection Agency

Air Resources Board

Standard Operating Procedure
Sampling and Analysis of Methyl Isocyanate in
Application and Ambient Air using High Performance
Liquid Chromatography with a Fluorescence Detector

Special Analysis Section Northern Laboratory Branch Monitoring and Laboratory Division

06/25/01 version

Approved by:

Russell Grace, Manager Special Analysis Section

1. SCOPE

The analysis of methyl isocyanate (MIC), a degradation product of the soil fumigant metam-sodium, is based on OSHA Method 54 using a high-performance liquid chromatograph with a fluorescence detector. This method analyzes application and ambient air samples for MIC using XAD-7 resin tubes coated with 1-(2-pyridyl) piperazine, a derivatizing agent. The Department of Pesticide Regulation (DPR) asked the Air Resources Board (ARB) to do ambient monitoring of MIC at a requested quantitation limit of 0.05 μ g/m³ and application monitoring at a quantitation limit of 0.1 μ g/m³.

2. SUMMARY OF METHOD

Resin tubes, XAD-7 coated with 1-(2-pyridyl)piperazine, are placed on the sampler for 24 hours at a flowrate of 75 milliliters per minute (mLPM). The samples are stored in an ice chest or refrigerator until extracted with 3 ml of acetonitrile (ACN). The injection volume is 0.01 mL. A high performance liquid chromatograph (HPLC) with a fluorescence detector is used for the analysis.

3. INTERFERENCES/LIMITATIONS

Interferences may be caused by contaminants in solvents, reagents, glassware and other processing apparatus that can lead to discrete artifacts or elevated baselines. For this method the derivatizing agent, 1-(2-pyridyl)piperazine, is an additional factor in possible interfences. A method blank, including both solvent and resin, must be analyzed with each batch of samples to detect any possible interferences.

4. EQUIPMENT AND CONDITIONS

A. Instrumentation:

Dionex LC20 Chromatography Module

Dionex GP50 Gradient Pump

Dionex AS40 Autosampler

Dionex RF-2000 Fluorescence Detector: 240 nm excitation, 370 nm emission.

Sensitivity: medium; Gain: 1

Eluant: Acetonitrile (ACN) and 25 mM Ammonium Acetate (NH₄ AC), pH 6.1.

Gradient: 5% ACN/95% NH4 AC to 30%ACN/70% NH4 AC in 20 minutes.

Flowrate: 1.0 mL/min.

Column: Restek Ultra PFP, 4.6 mm i.d. x 250 mm, 5 μm.

B. Auxiliary Apparatus

- 1 Precleaned vials, 8 ml capacity with teflon caps.
- 2 Whatman filters, 0.45 μm
- 3 Disposable syringes, 3 ml
- 4 Sonicator
- 5 Dionex Polyvials with filter caps, 0.5 mL.

C. Reagants

- 1 Acetonitrile, HPLC/Pesticide grade or better.
- 2 Ammonium Acetate, 99.99%.
- 3 Glacial Acetic Acid, HPLC Grade or better.
- 4 Nanopure Water, Type I
- 5. 1-(2-Pyridyl)piperazine, 99.5+% or better.
- 6. Methyl Isocyanate, Chem Service #O-2179, 99+%.
- 7. XAD-7 resin sorbent tubes, coated with 1-(2-pyridyl)piperazine. Supelco ORBO 657, 80/40 mg, Bellefonte, PA.

5. ANALYSIS OF SAMPLES

- 1 The instrument is equilibrated for approximately one (1) hour before analysis of samples. Check that the volume in the eluant reservoirs is sufficient for the sample batch.
- 2 It is necessary to analyze a solvent blank and a resin blank with each batch of samples to ascertain the presence of possible interferences.
- 3 A 6-point calibration curve is analyzed with each batch of samples. For the ambient and application studies the calibration will be 0.013 to 0.260 μg/mL of the purified MIC derivative. (See section 6.0 B for the preparation of the purified derivative.)
- 4 A calibration check sample of 0.078 μ g/ml is run after the calibration and every 10 samples and at the end of the sample batch. The value of the calibration check must be within $\pm 3\sigma$ (the standard deviation) or $\pm 10\%$ of the expected value, whichever is greater. If the calibration check is outside this limit then those samples in the batch after the last calibration check that was within limits need to be reanalyzed.
- With each batch of samples analyzed, a laboratory resin blank and a laboratory control spike will be run concurrently. A laboratory blank is XAD-7 extracted and analyzed the same way as the samples. A laboratory control spike is XAD-7 spiked with a known amount of MIC. The laboratory control sample is extracted and analyzed the same way as the samples.

- 6 Score and snap the sample resin tube, transfer the resin into an 8 ml vial. (Save the second tube for future analysis if necessary.) Rinse the tube with 3.0 ml of ACN into the extraction vial. Cap and place the vial in the sonicator for 1 hour.
- 7 Filter the samples using 0.45 µm filter attached to a 3 ml syringe directly into a Dionex sampling vial and cap securely. Cap and refrigerate the remaining solution vial if necessary for further analysis.
- 8 The atmospheric concentration is calculated according to:

Conc (μg/m³) = Extract Conc (μg/ml) X 3 ml / Air Volume Sampled (m³)

6. QUALITY ASSURANCE

A. Instrument Reproducibility

The reproducibility of the instrument has been established by analyzing five (5) injections of MIC-derivative standard at three concentrations (low, mid, and high). The low, mid, and high concentrations were 0.013, 0.078 and 0.260 µg/ml, respectively.

B. Purified Derivative and Calibration

- The purified MIC derivative is prepared as described in OSHA Method 54, section 3.3.1. A stock standard is prepared by dissolving the MIC derivative into ACN. The derivative is expressed as free MIC by multiplying the amount of MIC urea weighed by the conversion factor 0.2590. (See OSHA Method 54, section 3.3.2)
- 2. A six (6)-point calibration curve is made at 0.013, 0.026, 0.052, 0.078. 0.134, and 0.260 μ g/ml of the MIC derivative.

C. Calibration Check

A calibration check sample is run after the calibration, after every 10 samples and at the end of the sample batch to verify the system is in calibration. The value of the check must be within $\pm 3\sigma$ (the standard deviation) or $\pm 10\%$ of the expected value, whichever is larger. If the calibration check is outside the limit, then those samples in the batch after the last calibration check that was within the limit need to be reanalyzed.

D. Minimum Detection Limit

The detection limit is based on US EPA MDL calculation. The method detection limit (MDL) and the estimated quantitation limit (EQL) for methyl isocyanate is calculated by the analysis of seven (7) replicates of a low-level matrix spike. The MDL = $3.14*(std\ dev\ values)$, where std dev = the standard deviation of the concentration calculated for the seven replicate spikes. For MIC the MDL is $0.009\ \mu g/sample\ (0.003\ \mu g/mL)$. EQL, defined as 5*MDL, is $0.045\ \mu g/sample\ (0.015\ \mu g/mL)$ based on a 3 ml extraction volume. Results above the EQL are reported to 3 significant figures. Results below EQL but above the MDL are reported as DET (detected) and results less than the MDL are reported as ND (nondetect).

E. Collection and Extraction Efficiency (Recovery)

Methyl isocyanate at a low and high level are spiked on XAD-7 tubes. The spiked tubes are placed on field samplers with airflows of 75 mLpm for 24 hours. The samples are extracted with ACN and prepared as described in section 5, #6-7. The recovery of MIC for this method is low, ranging 50% to 70%. At concentrations above 1.0 μ g/mL the recovery is greater than 70%.

F. Storage Stability

Storage stability will be run concurrent with analysis of samples.

I. Breakthrough

A low sample flow rate is required for this method and optimization of the bed weights with the derivatizing agent is necessary to capture the MIC and minimize interference.

H. Safety

This procedure does not address all of the safety concerns associated with chemical analysis. It is the responsibility of the analyst to establish appropriate safety and health practices. For hazard information and guidance refer to the material safety data sheets (MSDS) of any chemicals used in this procedure.

APPENDIX III

Field Data Sheets for MIC

Project: MIC Ambient Air Monitoring in Monterey & Santa Cruz Counties

	•		P	roject#:F	2-01-004 On Flow	r. 75 <u>+</u> 2cci	m Off	Flow: 75ccm ±10%	·	
Log	Sample	Sampler		Time	Counter	Flow	Leak	Comments		Initials
#	Name	ID	On	On	On	On	On		K,P,C,F&R	Off
	(A. in the state of	Number	Off	Off	Off	Off	Off	14 是 25 年 15 年 15 日 15 日 15 日 15 日 15 日 15 日 1	Off	SWEET, T
0.10.,430			9/8/01	0647	11748.45	76	OK		F	SPR
001	SALM-1F	M!	9/9/01	0642	11772.38	08	6K		()	A
			9/8/01	0647	11748.45	76	OK		15	SPR
002	SALM-1B	m/	9/9/01	0642	11772 .38	ક્છ	OK		C	/ se
			9/8/01	0656	11748,60	73	ok		16/	SRR
003	SALM-IFSF	I1	9/9/11	0856	11772.61	. 59	OK	LOW FLOW		/A(
			9/8/01	0656	11748.60	73	OK		1/	SRR
004	SALM-IFS B	II.	9/9/11	0656	11772.61	59	01/2	LOW FLOW	C	/ AC
			9/8/01	0732	2464.57	75	OK		1	SRR
005	CHUM-1F	DI	9/9/01	0736	2488-64	68	OK			AL
	216		9/8/01	0732	2464-57	75	OK	·	FC	SRR
606	CH4M-13	D/	9/9/01	0736	2488-64	68	OK			/AC
	1000		9/8/01	08/3	1338.78	75	OK		6	SRR
007	LJEM-1F	61	9/9/01	0821	1362.8F	78	OK			SRR
	.60. 10	, ,	9/8/01	08/3	1338.74	75	OK		FC	SKIL
8 00	LJEM-1B	41	9/9/91	0821	3//3.63	78	OK		(SPR
440	Dec Marile	111	9/8/01	0903	3137,77	76	OK		1	De
7 00	PMSM-1F	KI			3113.63	77	OK			SPR
- 40	PSMM-1B	K1	9/8/01	0903	3/37,77	76	014		F 0	Ac
010	P5/9/01-1/5		9/8/91	0943	2152.12		OK		£ /	SRR
214	MESM-1F	E	9/9/01	0954	2176.30	74	OK		1	AC
014	(g &)		9/8/01	0943	2152.12	74	oK		۴	SRR
019	1965M-113	E /	9/9/01	0954	2176.30	71	OK		(4)	Ae
	INCS I III		9/8/01	1013	2185.16	74	OK		C/F	ERR/
A13	SESM-1F	61	9/9/01	1030	2209.46	75	BK		\mathcal{C}	/ Ac
017			9/8/01	1013	2185.16	79	OK			SPR
014	SESM-113	GI	9/9/01	1030	2209.46	75	OK		C	/ se
			9/9/01	-					0	AC
015	SALM-ITB		_	-		_	_	TRIP BLANK		/
			9/9/01	0652	11772,54	76	OK		BCC	R/
016	SALM-LF	MI	9/10/01	0634	11796.25	77	OIC			Z AR
			9/9/01	0652	11772.54	76	OK		C_0	AR 1
017	SALM-273	m/	9/10/,01	0634	11796.25	77_	OK			/H
			9/9/01	0706	11772.77	76	OK	Ball Sticks	C	AL
018	SALM-2FC	エー	9/10/01	0648	11796.48	78				Jac.
MFM (Jsed # 5346		Page	_ of <u>_ l</u> &	Weath	er codes: l	< = Clea	r, P = Partly Cloudy, C = \geq 75% Cloudy, F = F	og, & K = Ka	ıın (any)

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Project: MIC Ambient Air Monitoring in Monterey & Santa Cruz Counties

Off Flow: 75ccm ±10% Project #: P-01-004 On Flow: 75 +2ccm Weather Initials Comments Leak Flow Counter Time K.P.C.F&R Date Sampler Sample Loa On On On On On 1D 2 2 L Name # Off Off Off Off Off Constant Constant Number 76 BK 1/772.77 9/9/01 0706 Ac OK 11796.47 78 0648 9/10/01 SALM-2BC II 019 OK 76 2488.76 0745 9/9/01 1Re 65 69 OK 2512.8682 0748 D1 9/10/01 CHUM-2F C 020 016 2486.76 76 1746 9/4/41 65 69 0 x 2512,5682 0748 NI 9/10/01 CHum - 2B 021 2788.89 08 0753 9/9/01 10 AL 6965 OK 2512.8256 9/10/01 0784 CHum-21°C CI 022 OK 2468.88 5/9/01 0752 Ac 6965 25-12-8256 016 CI 0794 CHury-2BC 9/10/01 023 C フィ 010 1362.06 0832 9/9/01 72 ħν 386.89 0822 LJEM-21 41 9/10/01 024 75 OK 1363,06 0832 9/9/01 014 72 0822 1386,89 LJRM-2B 2/10/01 625 Rotaneter sensitive to adjust C <u>75</u> OK 363115 0838 alalos Low Flow 42× 02 387,18 T 0840 a 166/61 LJEM-2CF 026 75 OV 136315 alalox 0838 ١, 11 42 x 04 7 1 0840 138718 3/10/01 LJEM-2CB のクコ 3137.95 75 011 0923 9/9/01 72 0 4 316195 13923 PMSM-2 F KI 9/16/61 028 3137.95 75 OK 9/9/01 0923 012 72 3161.95 M23 KI 9/10/01 029 PMSM-2B d OK つら 934 2138.14 9/9/01 OX 74 31 3162,22 0933 030 Prsm-2FC 9/10/01 3138.14 75 OK 0934 9/9/01 74 nk 2213162,22 PMSM-2BC 191 9/10/01 0939 031 75 OK 2176.47 1004 9/9/01 00 2200.49 1006 MRSM-2F 9/10/01 672 OK 2176.47 1664 9/9/01 GK 2200,49 1006 MESM-2B EI 9/10/01 673 1176.58 0((1011 9/9/01 AC MRSM-2FC OK FI 2200,70 8 101 1/0/01 634 2176.58 74 OK AC 9/9/4 1611 MRSM - 20C 2200,70 OK EI 9/10/01 1018 035 A9 2209,65 OK 75 9/9/01 1042 SESM-2P GI 2233.66 1043 Weather codes: K = Clear, P = Partly Cloudy, C = ≥ 75% Cloudy, F = Fog, & R = Rain (any) Page 2 of /6

MFM Used # S316

Project: MIC Ambient Air Monitoring in Monterey & Santa Cruz Counties

Project #: P-01-004 On Flow: 75 +2ccm Off Flow: 75ccm +10%

Log	Sample	Sampler	Date	Time	Counter	Flow	Leak	Comments	Weather	
#	Name	ID	On	On	On	On	On		K,P,C,F&R	On Off
		Number	Off	Off	Off	Off	Off		On	
			9/9/01	1042	2209-65	フィー	ok		0	AW
037	SRSM-2B	61	9/15/01	1643	2233,66	71	OK		1	W
			9/9/6/	1047	2209.75	.73	OK		C	se/
038	SESM-2FC	AI	9/10/6/	1058	2233,92	70	οK			AR
			2/9/01	1047	2209.75	73	o K		C 6	Ae/A
039	GRSM-ZBC	Aı	9/10/51	1058	2233.92	70	ə ic			
CUB	278 45222		919101	1053			<u>_</u> _	Trip Spike	c	
0.16	SESM-1TS		9/10/01	0645	11796.42	76	OK		8	K)
041	SALM-3F	MI	9/11/01	0636	11820.29	76	OK		~ p	A
			9/10/01	0645	11796.42	76	OK		2	ge/
042	SALM-3B	m1	9/11/01	0636	11820-27	78	314			//K
	_		9/10/01	0739	2512.64	74 68	OK		P	TOS
043	CHMW-3E	CI	9/11/01	0726	2536.46		OK			Ae
ω)	Calvan	١ , ا	9/10/01	0739	2512,64	74	0 X		P	Me
044	CHUM-3B	CI	9/11/01	0828	1386.78	68°	OK		$\overline{}$	Ae Wh
nat	LJEM-3F	11	9/11/01	0828	1410.85	76	OK		PK	NI DE
V12	VA F 1. 31		5/10/01	0828	1386.98	75	OX		P	IR?
046	LJEM-3B	N	9/11/01	0820	1410.85	76	OK		'/ k	1 40
			9/10/01	0927	3162.03	75 76	0/L		P K	KR
047	PMSM-3F	KI	9/11/01	0923	3185.95	76	014		$\langle K \rangle$	/AC
2310		1/1	9 (0)01	0927	3162.03	<u> </u>	OK		9 / 1	JRR/
148	PM5M-38	KI	9/11/01	0923	3/85-95	76	01<		<u>/ </u>	/ AC
540	Machine	=,	9/10/01	1615	2200,65	75 79	OK		PK	AC AR
049	MESM-3F	E	9/11/01	1015	2224.62	75	OX			740
050	MESM-3B	El	9/11/01	1019	2224.62	79	OK		/ K	124
000	141 = 3 14 OD		9/10/01	1047	2233,74	75	0/2			M
05)	SESM-3F	Gi	9/11/01	1053	2257.84	77	OK		/ K	/ pc
			9/16/01	222774	2233,74	75	OX		1	IRL
052	JESM-3B	GI	9/11/61	1053	2257.84	77	014			100 PM
	CA: UE	,]	9/11/01	0646	11820.43	75	OK		PA	AC AC
053	SALM-4F	MI	9/12/01	0640	11844.33	76	OK	TRACK AMOUNT OF RAIN		T/AC
654	SALM-4B	141	9/11/01	0640	11844, 33	75	OK	11 11 11 11	R	Al de
477	JH-M- 111	711	9/12/01	0690		/ k		P = Partly Cloudy C = > 75% Cloudy F = Fo		

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Project: Chloropicria Ambient Air Monitoring in Monterey & Santa Cruz Counties
Project #: P-01-004 On Flow: 107 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |

• • •	·	<u>.</u>	Pi	roject#:P	-01-004 On Flow	r: -90 + 26 el	<u>n Off</u>	Flow: 90ccm +10%		
Log	Sample	Sampler	Date	Time	Counter	Flow	Leak	Comments	Weather	
#	Name	ID	On -	On	- On	On	On		K,P,C,F&R	On Off
		Number	Off	Off	Off	Off	Off	19. 19. 19. 19. 19. 19. 19. 19. 19. 19.	Ori Off	
			9/11/01	0736	2536.63	74	OK	LOWFLOW	0	K
055	CHUM-4F	CI	9/12/01	0730	2560.53	66	OK	HICKLY OLIMICART OF COASTAL RAPUL	-	AC
			9/11/01	0736	2536.63	74	OK	LOWFLOW	P /	k/
056	CHam - 4B	CI	9/12/01	0730	2560.53	66	OK	Li tr u ti fi	<u>'</u>	/AC
		,	9/11/01	0831	1411.03	75	ok		K/0	AR.
057	LJEN-4F	41	9/12/01	0827	1434.96	76	014		ر ب	/ PC
-0			9/11/01	0831	1411.03	75	OK		Ke	AR AL
058	LJEM-4B	41	9/12/01	0827	1434.96	76	0/<			
2/0	PMSM-4F	נעג	9/11/01	0932	3186.12	74	OK	·	KP	AP/AR
95 9	114211-41	KI	9/11/01	0932	3/86.12	74.	OK			10
060	PMSM-4B	KI	9/12/01	0915	3209.82	74	OK		KP	AR
			9/11/01	1022	2224.76	75	014		K	10/
061	MESM- YF	El	9/12/01	0952	2248.27	65		MOSTURE INSIDE CARTRINE	KK	ZAK,
		· ·	9/11/01	1022	2224.76	75	OK		16	R/
062	MESM - 4B	El	9/12/01	0952	2248.27	45	OK	11 7 4	K	AC
10	0-110		9/11/01	1107	2258.06		SIC	•	K	BS
063	SESM-4F	61	9/12/01	1034	2281.50	77	OΚ			<i>///</i>
111	SESM-4B		9/11/01	1107	2258.06	76	OK		KK	As/a
064	563/4 717	GI	9/12/01	1034	2281.56	77	OK			AC
065	SALM-5 FB	MI	9/17/01	0640	11844.50	75	OK	·		3 W/A
	3747-310	74()	9/18/01	0722	1/868.23	78	OK		OK	TWAS
066	CHUM-5 FB	CI	9/17/01	0768	2584.54	79	OK		F	Ac
			9/17/01	0807	1435.17	76	OK		00	5 0/1-
067	LJEM-SFB	LI	9/18/01	1014	1.461.32	76	OK	OVERTIME - VEHC. PROBLEM	0	1.2c
			9/17/01	0855	3329.47	75	OK		00	500/
068	PMSM-5FB	KI	9/18/61	1/01	3355.62	76	OK		~	/ Re
44.6	11661 516	- ·	4/17/01	0921	2248.45	75	OK		OC	30
004	MESM-5 FB	ΕI	9/18/01	1133	2274.70	76	014			/AL
070	SESM-SFB	6.	9/17/01	0942	2281.72	75.	35		000	15W/2
0 /0	263M-3 FO	91	9/18/01	1208	2308.20	74	3K		4	/AL
ודס	SALM-5TB		0/10/21					TRIP BLANK	OC	76/
	JACI11-3 1B		9/18/01	0633	11868:41	76	014	TAND DONAL		1
०७३	SALM-6 FB	mi	9/19/01	0720	11893.17	75	015		R. K.	Ae Ju
		, ,	וטונוור	ا مر مر ها	1/012-11			D = Darthy Cloudy C = > 75% Cloudy E = E		

MFM Used #

Project: MIC Ambient Air Monitoring in Monterey & Santa Cruz Counties

					2-01-004 On Flow			Flow: 75ccm ±10%	1 111- 6	11.14
Log	Sample	Sampler		Time	Counter	Flow	Leak	Comments		Initials
#	Name	. ID	On	On	On	On	On	The Court of the control of the control	K,P,C,F&R	Of Of
		Number	Off	Off	Off	Off	Off		Off	
A 7 7	CA . 04 . 4 = =		9/18/01	0639	1186858	74	CK		P	A JU
073	SALM-6CFB	II	9/19/01	0728	11893.31	74	OK		F	3w
Λ7. <i>i</i>	CHUM LED	0,1	9/18/01	0821	2584.75	76	OK		FF	R/
014	CHUM-6FB	01	9/19/01	0800	2609.36	82	8K			SW
A76	CHUM-GCFB	 	9/18/01	0726	2584.82	77	OK	•	F	4
012	CHUM-QC18	10	9/29/01	0805	2609.44	75	0K			/ 34
076	LJEM-6FB	LI	9/18/01	1026	1484.49	74	OK		SE	ASW.
- 76			9/19/01	1030	1461.58	76	06		C /	AR/
770	LJEM-6CFB	51	9/18/01	0933	1484.59	76	OK		F	JW
			9/18/01	1112	3355-80	76	ok		a /	
078	PMSM-6FB	KI	9/19/01	1012	3378.75	77			C	A-SW
			9/18/01	1115	3355.89	75	OK		0	A/
079	PMSM-6CFB	B1	9/19/01	1015	3378.80	76	OK.		/	Sw
. 0 .			9/18/01	1144	2274.86	75	OK		C	AS
080	MESM-6FB	El	9/19/01	1044	2297.83	74	0大			13W
081	******	· .	9/18/01	1146	2274.86	75	01<		C	AL
051	MESM-GCFB	FI	19/01	1048	2297.89	74	OK		/ c	30
082	SESM-6 FB	GI	9/18/01	1222	23.08.4/	76	01		SPC	AS
000	363/1-615	-61	9 119(01	1127	2331.47	77	OK			300
083	SESM-GCFB	AI	9/18/01	1225	2306-48	78	OK		CPC	AS SW
	JCJ//(CC11)	71 (9/19/01	1127	11893.45	75	OK		'	/
084	SALM-7 FB	MI	9/23/01	0636	11917. 27	75	OK		F	JUJU
			9/22/01	0732	2609.52	75	oK	<u> </u>	F	JW/
085	CHUM-7FB	cit	9/23/01	0733	2633.55	9	OK	Low Flow	15/cl	25 W
			9/22/01	0821	1484.75	75	OK	_	F	JWZ
980	LJEM-7FB	41	9/23/01	0834	1508.50	76		FOUND AL. OFF (RUNTIME = 23.75)	1 c	15W
			9/22/01	0919	3449.87	714	改		PC	IW/
087	PMSM-7FB	ki l	9/23/01	0926	3474.01	76	0٤	,	-	- 3W
.00			9/22/01	1027	2298.00	74	05		PC	5W/
088	MESM-IFB	E1	9/23/01	1017	2321.83	75	20		PL	1500
00C	666M 750	a. T	9/22/01	1059	2331.55	75	OK		pc	7W/5
U 57	SESM-TFB	GI	9/23/01	1100	<u>2355.57</u>	78			1ºC	20
امهم	CALM-OCE	MI	9/23/01	0647	11917.45	74	OK			2m
710	SALM-8FB	1111	9/24/01	0641	11941.35	.75	0/	P = Partly Cloudy C = > 75% Cloudy E = E	/ <	

24000

MFM Used# 534%

Page <u>\$</u> of <u>16</u>

Project: MIC Ambient Air Monitoring in Monterey & Santa Cruz Counties Project #; P-01-004 On Flow: 75 ±2ccm Off Flow: 75ccm ±10% Flow Leak Comments Weather Initials Sample Sampler Date Time Counter Log K,P,C,F&R On ID On On On On # On Name Off Off Off Off Off Number 95 0744 2633.74 9/23/0i OK 190 CHUM-8FB 80 9/24/01 2657.62 C1 0737 OK 30 1508.72 75 0843 OK 9/23/01 092 LJEM-8FB LI 1532.61 9/24/01 0837 77 OK 0936 3474.05 75 OK JW 9123101 093 PMSM-8FB KI 3498.23 12M 9124101 0941 عا 1` 0大 2321.98 7.5 9/23/01 1026 OK MESM-8FB EI 094 2345.97 OK ר ד 9/24/01 1025 2355.72 9123101 15 1109 OK 095 SESM-8FB GI 3379.72 77 9/24/01 1100 OK 75 015 0649 11946,49 JW 9/24/01 096 SALM-9 FB MI PAINED 11965.48 OK 0648 OVERNIETH 9/25/61 74 OK 2657.79 C 9124101 0747 75 JW. 097 CHUM- 9 FB 2681.77 9125/01 0746 81 OK 9/24/01 0849 1532.81 75 OK LJEM-9FB ,, 098 1557.05 9/25/01 0902 OK ~7 Z 00 3498.40 OK 9/24/01 0951 ว_ัน 099 PMSM-9FB KI 0954 74 9/25/01 3522.48 oΚ 9/24/01 1035 76 234413 OK " MESM-9FB EI 100 9/25/01 2370.10 1047 78 oK 9/24/01 1119 2379.88 OK SESM-9FB Ų GI ioi 9/25/01 1122 24 03.95 OK 7/ OK 9/25/01 77 0702 11965.73 1 SALM- 10 FB MI 102 9/26/01 0635 41989. 25 76 0> 9/25/01 11965.88 76 0712 OK II # SALM-10FS 103 2/26/01 0645 76 *1198*9. OK 9/25/01 SALM-TS 06/2 104 TRIP SPIKE **-**700 9/25/01 SALM-TB 0613 TRIP BLANK 105 9/25/01 2681,95 75 0757 OK CHUM-10FB CI 106 2705.66 9/26/01 0740 75 OK 9/25/01/0914 OK 1557, AS 74 LJEM-10FR 107 1580.51 0832 OK 9/26/11

OK

OK

75

76

740000

MFM Used # __53 4ω Pa

KI

IPMSM-10FB

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0938

3522.69

3546.19

9/25/01 1608

9 126/01

Project: MIC Ambient Air Monitoring in Monterey & Santa Cruz Counties

			•		2-01-004 On Flow	_	•	Flow: 75ccm ±10%	•	
Log	Sample	Sampler		Time	Counter	Flow	Leak	Comments	Weather	
#	Name	ID	On	On	On	On	On	record in the course to be	K,P,C,F&R	On Off
	a tagan ang ka	Number	Off	Off	Off	Off	Off		On	
109		~.	9/25/01	1059	J370.30	76	oK		K	CHISW
107	MESMIOFB	EI	9/26/01	1020	2393.64	80	OK		K	/3W
٠٠٨٠			9/25/01	1134	2404.15	75	OK		KK	COSW
110	SESM-10 FB	GI	9/26/01	1117	2427.76	78	OK			
111	50,00 11 = 3		9/26/01	0654	11989.57	76	OK		KPE	age
	SALM-11FB	MI	9/27/01	0629	11989-69	75	OK			305/
142	SALM - IIFBC	Il	9/26/01	0701	12013.38	75	0/5		K PE	300
	i		9/26/01	0759	2705.98	7.5	OK		K	5w/
113	CHUM-11FB	DI	9/27/01	0730	2729.51	70	OK		<i>></i>	1090
•	l		9/26/01	0754	2705.89	75	0人		K	5W/
114	CHUM-11FBC	c /	9/27/01	0718	2729.31	83	OK		/ ρ	100
	1		9/26/01	0842	1580.70	76	OK	•	K/	5W/
115	LJEM-11FB	11	9/21/01	0807	1604.13	82	6K		/ -	1000
116		T ,	9/26/01	0847	1580.77	76	cK			20
110	LJEM - 11FBC	JI	9/27/01	0815	1604-26	79	OK		/F	1000
ווו	PMSM-11FB	KI	9/26/61	0949	3546.38 3569.51	75	OK		Koc	Car
•••	7 70(31 / // 2	1-7	9/26/01		3546.44	75	OK			5ω/
118	PMSM-11FBC	Bi	9/27/81	0905	3569,65	77	OK		ع ه	100,0
			9/26/01	1030	2393.80	74	OK			J w/
119	MESM-11FB	EI	9/22/01	0939	2416.97	73	OK		2 oc	10,90
			9/26/01	1043	2394.02	74	OK		K	ZW/
120	MESM-11FBC	FI	9/27/01	0949	2417.13	74	OK		/ OC	1020
			9/26/01	1/22	2421.93	7.5	OK.		K	2 W
121	SESM - 11 FB	G/	9/27/01	1026	2451.02	62	oK			pap
135			9/26/01	1/26	३५२४.००	76	OK		K/	2 m/
low	SESM-11FBC	AI	9/27/01	1036	2451.17	80	OK'		$\stackrel{r}{\longrightarrow}$	1000
133	SALM-12 FB	34.	9/27/01	0648	13613,48	76	OK		PAK	CAP
100)	SHOW-12 FB	M1	9/28/01	0652	1237 55	74	OK			Wil
124	CHUM-12FB	Ci	9/27/01 9/28/01	0726	2729.61	80	OK		PK	aggw
		~		0820	1664.35		OK			
125	LJEM-12 FB	41	9/28/01	0805	1628.08	76 79	ok		FK	JW
			7	0910	3569.74	76	6K		00	Care
196	PMSM-12FB	KI	9/28/01	0844	3593.28	75	OK		/K	95W
MFM (Jsed # 5346		Page 7	of 16	Weath	er codes: K	= Clear,	, P = Partly Cloudy, C = ≥ 75% Cloudy, F = Fo	g, & R = Rai	in (any)

Project: MIC Ambient Air Monitoring in Monterey & Santa Cruz Counties
Project #: P-01-004 On Flow: 75 +2ccm Off Flow: 75ccm +10%

			Projec	t: MIC An	nbient Air Monitori -01-004 On Flow	75 +2ccr	n Off I	Flow: 75ccm ±10%		1 :4:-1-
					Counter	Flow	Leak	Comments	Weather	
Log	Sample	Sampler	Date	Time	On	On	On		K,P,C,F&R	Of
#	Name	ID	On	On	Off	Off	Off		Off	
		Number	Off	Off			oK		00	ap
			9/27/01	0955	2417.24	76	OK		K	<u> </u>
127	MESM-12 FB	EI	9/28/01	0918	2440.59		OK		PK	Cap/
			9/27/01	1041	2444.31	75	0.5			1/34
128	SESM-12FB	GI	9/28/01	0946	12037-92	75	oi<		Foc	Office
100			10/3/01	0722	12061-91	75	OK			7
129	SALM-13FB	MI	10/4/01	0700					10C	0/2
120			10/4/01					TRIA BLANK	1-	1 6 /
	5:ALM - 13 TB		10/3/0/	0813	2753.78	76	OK		Foc	Store
13i	CHUM-13 FB	c/_	10/4/01	0826	2777.99	87	9K		cc/	
	CHUM-13 FB	1-5/		0904	16 28.39	74	OK	-	OK	dop
132	LJEM-13FB	L1	10/4/01	0931	1652.82	71	OK		0500	01/
	Z J CN 1-1 3/11		10/3/0/	0958	3714.54	74	oK oK		900	dex
133	PMSM-13=B	KI	10/4/01	1031	2441.62	76	OK		K	CP/
		1	10/3/01	1055	2465.62	74	OK		P	COP
134	MESM-13FB	EI	10/4/01	1143	2474.59	75	OK		15 D	apo
			10/3/01	1229	2999.35	73	OK			CAP
135	SESM-13FB	GI	10/4/01	0733	12662.10	74	01<		0° 0°	1/0
12/2	1450	MI	10/5/01	0734	12085.16	75	OK			OP
156	SALM-14FB	101	10/4/01		1206220	75	6K		O.C.	OV
137	54LM-14FBC	III	10/5/01	0647	12085-33	75	OK		10	100/
<u> </u>	04-201-111150			0839	2778-20	76	ok ok	<u> </u>	00 0 C	Rep
138	CHUM-14FB	CI	10/4/01	0741	2801.74	75	OK		OC	OF P
<u> </u>	1000		10/4/01	0846	2758-32	75	OK		oc.	100
139	CHUM - 14 FBC	DI	10/5/01	0753	1652.98	75	OK		00	0/1
		1.,	10/4/0/	0940	1676-16	75	OK		O.C.	
140	LJEM-14FB	<u> L1</u>	10/5/01	0851	1453.05	76	OK		oc oc	04/2
		_ -	10/4/01	0902	1676.35	83	OK			age
141	LJEM-14FBC	<u> </u>			3739.27	10	OK	4	0C 0C	COL
1,,,	1 1.45	KI	10/4/01	1060	3752.68	76	OK		OC,	al
144	2 PMSM-14=B	+	10/4/01	1048	3739.36	76	OK	-	8C	1 My
143	PMSM-14FBC	BI	10/5/01	1010	3762,73	76	OK		B	600
1	1/VI 3/4 -/ 71 /3 C		10/4/01	1143	7465,79	74	OK OK	•	ه م ۱۰۰	ala
141	+ MESM-14FB	EI	10/5/01	1107	2489.19	77	: K = Cle	ear, P = Partly Cloudy, C = ≥ 75% Cloudy, F	= Fog, & R =	Rain (ai
	1 Used #		Page _2	g of 16	vvea	anter codes	5. IX - OR			

Project: MIC Ambient Air Monitoring in Monterey & Santa Cruz Counties

Project # P-01-004 On Flow 75 +2ccm Off Flow 75ccm +10%

Log	Sample	Sampler		Time	Counter	Flow	Leak	Flow: 75ccm ±10% Comments	Weather	Initials
#	Name	םו ו	On	On	On	On	On		K,P,C,F&R	
		Number	Off	Off	Off	Off	Off		On Off	
11500			10/4/01	1152	2465.94	74	OK		A	app
145	MESM-14FBC	FI	10/5/01	1125	2489, 49	76	OK		OC	090
			10/4/01	1241	2499.55	76	OK		1	w/
146	SESM-14FB	GI	10/5/01	1226	2523.29	81	OK		100	ago
			10/4/01	1248	2459.65	75	OK		D	me/
141	SESM-14FBC	A I	10/5/01	1238	2523.49	74	OK		VX	201
•			10/5/01	6700	(2085.56	74	OK		oc/	mb/
148	5ALM-15FB	MI	10/6/01	0638	12109.19	75	01<		OC	20AP
I	·		10/5/01	0803	2801-61	76	OK		OC-	1000
149	CHUM-15FB	C /	10/6/01	6740	2925.25	82	OK		70C	209
150			10/5/01	0913	1676.53	75	OK	• •	X_	al
150	LJEM-15FB	<i>L1</i>	10/6/01	0833	1699.87	76	OK		OC	Jog!
151	A. C. 165-3		10/5/01	1021	3762.92	75	OK		OC.	09/20
12	PMSM-15FB	KI	10/6/01	0938	3786-22	76	OK		oc	Xog
152	MESM-15FB	EI	10/5/01	1040	2489.70	79	OK		OCC	Olgo
	71163101-1310	<u>e</u> /_	10/5/0/	1249	2523.68	74	OK			
153	SESM-15FB	Gi	10/6/01	1151	2546.71	77	OK		0C 0c	Sans
	!		10/6/01	0649	12109-37	75	OK		oc/	1
154	5ALM-16FB	MI	10/7/01	0637	12133.17	75	OK	SLIGHT DRIZZLE	P	200
1 1	· · · · · · · · · · · · · · · · · · ·		10/6/01	0751	2875.41	76	OK		oc.	De De
155	CHUM-16FB	C1	10/17/01	0730	2849.07	83	οK		F	Las
	1		10/6/01	0844	1786.05	75	OK		00	w
156	LJEM-16FB	LI	10/9/01	0822	1723.67	76	OK		OC	Har
			10/4/01	0949	3786.39	75	ok		1~/	as
131	PMSM-16FB	KI	10/7/01	0927	3910.02	75	OK		OC	200g
,,,0		}	10/6/61	1049	2512-89	76	OK		00	OF
100	MESM-16FB	E1	10/7/01	1015	2536-33	76	oK		P	70ps
150			10/6/01	1201	2546.88	76	OK		05/	Office
121	SESM-16FB	GI	10/7/01	1122	2576.23	75	οK		K	<u> 2090</u>
[1	SALM-17 FB	mi	10/11/01	0705	12133.43	75	OK		15	AR AR
	SHETT IN 13	-17/	-	- 0 / 0			_			-
161	SALM-ITTS	-	10/12/01	0655				TRIP SPIKE	70	TAR
		_	-	1	_	-	_			
16%	SALM-ITTB		10/12/01	0657	, <u>-</u> -	_	-	TRIP BLANK	P	/se

0077

MFM Used # _ 5346 Page _ 9 _ of _/6

Project: MIC Ambient Air Monitoring in Monterey & Santa Cruz Counties

			l lojeo Dr	oiect#'P.	-01-004 On Flow:	75 +2ccn	n Off I	-low: /5ccm +10%	14/461	lmi4inln
	Comple	Sampler	Date	Time	Counter	Flow	Leak	Commence		Initials
Log #	Sample Name	ID	On	On	On	On	On		K,P,C,F&R	
#		Number	Off	Off	Off	Off	Off		Off	
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		iduloi	07/2	12133.56	75	OK	Rond PA	1 Kp	AR AR
163	SALM-17 FS	I1	10/12/01	0704	12157.72	74	<u>ok</u>	ROAD PAUINI NEAR BY		
	£ 1/LL 7		10/11/01	0807	2849.29	75	OK		K/P	AR AR
164	CHUM-17 FB	Cl	16/12/01	08/2	2873.39	116	0/<	HILL END FLOW	DC.	Ac.
			10/11/01	0907	1723.96	76 77	OK OK		م	R
165	LJEM-17 FB	41	10/12/01	0918	1748.14	75	OK		oc/	AC
		1	10/11/01	1002	3906.62 3930.99	73	01<			
166	PMSM-17 FB	KI	10/12/01	1024	2536.55	75	OK		PC	AR
1/ 7	1760	ر پر	10/51/01	1107	2560.74	77	BK			Ac
167	MESM-17FB	区1	10/11/01	1127	2570.52	75	OK	_	PC	RA
168	SESM-17 FB	61	10/12/01	1148	2594.86	77	OK	TRACTOR DISCHUL FIRED ACROSE STREET	K	AC
100	323191417713		10/12/01	0319	12157.68	75	OK		K	AR AC
169	SALM-18 FB	MI	10/13/01	0641	12181.04	75	OK			R
			10/12/01	0727	12157.81	75	01<		PK	AR
170	SALM-18 FBC	II	10/12/01	0654	12181. 24	75	OK	ROAD PAVING NEARBY	P	Ae/
			10/12/01	0826	2873.66	75	OK		K	148
171	CHUM-18 FB	C/	10/12/01	0756	2873.73	76	OK	ROAD PAULNE NEW BY	9	1AR/
2000			10/12/01	0806	2897,26	77	OK		10	/ Ac
112	CHUM-18 FBC	DI	10/12/01	0933	1748.36	74	B/c		1	A
173	LJEM-18 FB	41	10/13/01	0904	1771-21	77	OK	AREA SMELLS SMOKEY	K	
<u> </u>	LUEM-1013	<u> </u>	10/12/01	0938	1748.47	75	OK		KK	AC
174	LJEM- 18 FBC	51	15/13/01	0916	1771.41	86		HILLI END FLOW AREA SYKLLS SMOKKY		AC
 •••	1000		10/12/01	1032	3931.12	75	OIC	1	K	Ae
175	PMSM-18FB	KI	10/13/01	1012	3954.86	74	OK		K	AR 1
			10/12/01	1037	3931.21	74	OK		/ K	AR
176	PMSM-18 FBC	BI	10/13/01	1024	3954.98		OK		15	Ae/
175	1	6.	10/12/01	1118	2584.81	75	05		K	A
11/	MESM-18FB	1 21	10/12/01	1/1/2	2561.01	76	OK		15/6	ARA
178	MESM-18FBC	FI	13/13/01	1/20	2584.95	77	015			100
	146741.181.26	 	10/12/01	1213	2595.27	75	01<	TRACTOR DISCING FIRES ACROSS STREET	KK	AR /
179	SESM-18 FB	GI	13/13/01	1200	2619.07	76	οK	TRACTOR DISCING FIRED ACROSS ETREET	 	4
" '	222 (18 . 2	 	10/12/01	1218	2595. 37	75	OK	- CHACTOR DISCING HIRLD HERES 21 KEET	K	ARAC
180	SESM-18FBC	AI	10/13/01	1210	2619 -22	73	1 OK	D - Both Cloudy C - > 75% Cloudy F =		
	Used # 5346			o of <u>/6</u>	Weat	her codes:	K = Cle	ar, P = Partly Cloudy, C = \geq 75% Cloudy, F =	. og, i	

Project: MIC Ambient Air Monitoring in Monterey & Santa Cruz Counties

			Pr	oject#: P	-01-004 On Flow	75 +2ccn	n Off	Flow: 75ccm +10%	· · · · · · · · · · · · · · · · · · ·	
Log	Sample	Sampler		Time	Counter	Flow	Leak	Comments	Weather	
#	Name	ID	On	On	On	On	On	The same of the same of the same of the	K,P,C,F&R	Off
		Number	Off	Off	Off	Off	Off	and the second of the second of the second of the	Off	
		ivanibo.	10/13/01	0706	12181.45	75	OK		K	AR/
101	CA 14 .0 -0	MI	10/14/61	0655	12205.27	74	OK	<u></u>	K	AC
i81	SALM-19 FB	, , ,	10/13/01	0820	2897.49	75	OK		K	49/00
		1	10/14/01	0750	2921.00	75-	OK		W	AC
182	CHUM-AFB	CI	10/13/01	0927	1771.59	75	OK		K	AR/
109		LI	13/14/61	0847	1794.92	75	OK		. · · · · · · · · · · · · · · · · · · ·	AR
183	LJEM-19FB	<u> </u>	10/13/01	1035	3955.18	75	OK		~	Ae/
1011	PMSM-19FB	K(10/14/01	0940	3978-26	75	OK		K	AR
184	TMSM-17FB	131.	10/13/01	1/32	2585.15	75	OK		K	AR
185	MESM-19FB	E1	13/14/01	1043	2608.33	80	014		K	/ AC
183	178519-11-15	12-1	10/13/01	1222	2619.42	75	OK		K /2	AC
186	SESM-19FB	61	10/14/01	1127	2642.51	76	OK		/ K	/Ae
100	7631-111-		10/14/01	0704	12205.43	74	OK		KIC	AL
187	SALM-20FB	MI	131,5/01	0605	12228:43	74	ok_			14
· · · ·			10/14/01	0802	2921.20	.76	Ojc		WK	AL
188	CHUM-20FB	01	10/15/01	0702	2944.20	73	OK			A
			10/14/01	0856	179508	.76	OK		W/4	AC
189	LJEM-20FB	LI	10/15/01	0756	1818.08	74	OK		K	/ AR
-			10/14/01	0950	3978.42	75	01<		KK	AS
190	PMSM-20FB	KI	10/15/01	0850	4001-42	77	OK			/A
	<u> </u>		16/14/01	1052	2608,48	74	OK		KK	MAC
191	MESM-20FB	EI	10/15/01	0952	2631.48	78	OK	A C \ AFRICA COM		
 			10/14/01	1136	2642.67	74		TRACTOR DISCING FIRED ACROSS STREET	KK	AR/AR
192	SESM-20FB	61	10/15/01	1036	2665.67	77	OK	<u> </u>	F	SPR
			10/19/01	0642	12228.66	77	OK		F	THE
193	SALM-21FB	WI _	10/20/01	0620	12252.28	73_	OK-			
		-	10/19/01	0651	12228,81	77_	0/5	-	FF	SRE LR
194	SALM-21FBC	11	10/20/01	0636	12252,56	78	OK		F	100
			10/19/01	0740	2944.29	٦٦	OK	4	F	The state of the s
195	CHUM-21FB	CI	10/20/01	0731	2968.14	80	OK	Wester, Prival + Sected	F	M
3		1	10/15/01	0747	2944,40	74	OK	mares & helves & Decrees	F	IK.
196	CHUM-21FBC	DI	10/20/01	0742	2968.32	<u> 42</u>	OK		00	Nº.
7			10/19/01	0835	18/8/16	75	OK		PCP	MAR
1 197	LJEM-21FB	177	10/20/01	0848	1942,39	7.5	OR		P	11/2
1			10/19/01	0842	1818/		OK	200 Plan	P	YAR
198	LJEM-21FBC	171	10/20/01	10904	1842.65	65 %	IOK	D = Dody Cloudy C = > 75% Cloudy E = F	- 0 D - D	

MFM Used # 5346

Project: MIC Ambient Air Monitoring in Monterey & Santa Cruz Counties

Project #: P-01-004 On Flow: 75 +2ccm Off Flow: 75ccm +10% Weather Initials Comments Leak Flow Counter Time K,P,C,F&R On Date Sampler Sample Log On On On On On 1D Name # Off Off Off Off Off Number C OK 75 0928 4098.03 IR. 10/19/01 MOK 75 4/2242 KΙ B951 robolor SESM-21FB 199 76 OK 4098.16 10/12/01 1935 OK **74** 4122.65 BI 1005 10/20/01 SESM-21FAC 206 ۵ 7.3 OK 2631,58 1009 10/19/01 FI 72 OK 2656.15 1043 201 |MESM-21FB 10/20/01 OF 2631,70 10/19/01 $\Gamma I \cap I$ 73 EI 2656.32 1054 202 MESM-21FBC 10/20/01 water OK 77 2665.78 10/19/01 1052 60 * OK 2690,59 GI 10/20/01 114 203 SESM-21FB OK 74 2665.91 10/10/01 1100 73 2690,75 01 AI 1151 204 SESM-21FBC 10/20/01 F OK 76 12252.47 0630 02 12276.32 75 NII 0622 SALM-22FB Samples blow eyes. When? 205 OK 2968.69 76 0804 OK 2992.32 77 CI 0742 CHUM-22FB 206 ø 842,5 C <u>74</u> 0 1 1859 vi UK בר 0854 1266,47 LJEM-22FB LI 207 OX 74 412257 1000 20/01 OK 76 4146,44 0952 PMSPA-22FB 208 DK 2656.57 1109 20/01 OK 268014 1043 209 MES M-22FB FI OK 2690.89 1159 OK フダ 1714.45 ISESM-22FB 1A 1133 210 OK 74 6632 10/21/01 OK 72 12299.96 0600 MI 10/22/01 1RR ISALIM-23FB Siliconcal togot rainshild 211 75 299253 0755 10/21/01 OK 76 0722 2016,00 CI ICHUM-23FB 212 76 OK 16/21/01 0902 OK 296,06 1829 213 LJEM-23FB OK 4146.58 1001 74 04 1926 4170.01 214 PMSAN-23FA 10/22/01 E P 75 OK 2680,30 1053 15/21/01 OK 2703.62 73 FI 012 215 10/22/01 MESM-23FB OK 27/46 1142 01 Al SESM-23 FB 158 Weather codes: K = Clear, P = Partly Cloudy, $C = \ge 75\%$ Cloudy, F = Fog, & R = Rain (any) Page 12 of 16 MFM Used # 5346

Project: MIC Ambient Air Monitoring in Monterey & Santa Cruz Counties

Project #: P-01-004 On Flow: 75 ±2ccm Off Flow: 75ccm ±10% Comments Weather Initials Flow Leak Date Time Counter Sampler Sample Loa K.P.C.F&R On On On On ID On On Name Off Off Off Off Off Number 0608 10/22/01 Trip Blank 217 SALM-24TB 12300,21 76 OK 0616 218 ISALM-24 FB MI 78 OK 0628 12.324.41 74 0131 OK-10/22/01 3016113 219 CHUM-24 PB 16*152lo* v 3039.92 76 OK P160 75 0839 1890.22 OK 101.22/01 220 LJEM-24FB \$1913,60 OK 10/23/01 0805 コぢ 0935 4170.15 75 OK 73 221 PMS M-24FB 4193,37 OK KI 0843 าร OK 1021 270377 OK 222 MESM-24FB 2726.83 0924 75 OK 1108 10/22/01 2738,04 12 123 SESM-24FB 10/23/01 1009 27 61.05 76 OK JUS 10/27/01 67/7 12324.7a 75 OK C 224 SALM-25 FB MI 0700 OK 5W 12348.44 74 10/28/01 JW. 0725 12324.85 10/27/01 75 OK 3W 225 SALM-25 FBC II 10128/01 0711 12348.61 68 OK 75 3040.23 OK 0809 10/27/01 226 CHUM-25 FB CI 10/28/01 0807 3064.20 75 OK 10/27/01 0818 3040.37 74 OK 227 CHUM-25 FBC /JW 3064.41 65 OK DI 10/28/01 0820 50 1913.83 75 OK 10/27/01 0901 ∕J₩ 228 LJEM-25 FB 0902 LI 1937.85 76 OK 10 38 01 JW. 0908 1913.95 75 OK 10/27/01 /5W 229 LJEM-25 FBC JI OK 80 0914 1938.05 10128101 76 JW. 10/27/01 0957 OK 4290.54 230 PMSM-25 FB 5 W OK Kı 10128/01 1008 4314.71 74 OK JW 10/27/01 1006 4290.67 /J'W PMSM-25FBC Bi 231 76 4314. 93 OK 1021 10[28]01 OK 5W. 2727.04 75 14/27/01 1040 232 MESM-25FB 75 OK ۴ı 10.58 2751.34 10/28/01 JW 75 10/27/01 OK 2727.16 1047 500 233 MESM-25FBC EI 10/28/01 2751.55 77 OK 1111 JW 10/27/01 2761.23 75 OK 1127 234 SESM-25 FB 79 1143 2785.49 61 OK 10/86/01

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Project: MIC Ambient Air Monitoring in Monterey & Santa Cruz Counties

Project #: P-01-004 On Flow: 75 +2ccm Off Flow: 75ccm +10% Comments Flow Leak Weather Initials Counter Sample Sampler Date Time Log K,P,C,F&R On On On On ID On Name On Off Off Off Off Off Number 7W 77 10/27/01 1136 2761.38 OK 235 SESM-25FBC 74 2785.70 10(28)01 OK 13 W AI 11 Sb _ 236 TRIP BLANK 1929 01 SALM-26TB -- 237 SALM-26TS TRIP SPIKE 10/29/01 75 OK 12348.80 10/28/01 e722 238 SALM-26FS C FIELD SPIKE 10/29/01 0709 12372.59 74 OK SW II 12348.90 75 0728 6K 10/28/01 239 SALM-26FB /SW 10/29/01 12372.74 75 OK 07/8 MI 3064.33 74 OK 5W) 0815 10/28/01 240 CHUM-26FB 3088.36 10/29/01 80 0817 OK ZW CI 10/28/01 0910 1937.98 74 OK 500 241 LJEM- 26FB 76 OK 35 W Li 10/29/01 0919 1962. i3 4314.85 JW. 10/28/01 1016 76 OK 242 PMSM-26 FB 4339.00 OK KI 10/29/01 1025 76 10/28/01 OK 5W. 1106 2751.48 75 243 MESM-26 FB OK 15 W 10/29/01 1111 2775.56 78 FI OK JW 1152 10/28/01 2785.64 75 244 SESM - 26 FB 78 1157 2809.72 5W 10/29/01 oK GI 30J SCLO 76 OK 10/29/01 12372.90 245 SALM-27 FB ้ฮน 12396.51 74 19 30/01 0705 OK MI 0827 3088.53 75 OK JW. 10/29/01 246 CHUM- 27 FB 77 301 0806 3112.17 10/30/01 CI 1962.28 0929 76 0大 JW 10/29/01 247 LIEM-27FB 1985,96 لناكآ 0808 72 OK 10/30/01 1033 4339.12 JW 75 10/29/01 210 248 PMSM-27 FB JW 4302 22 10/30/01 1020 59 OK JW. 2775.69 75 10/29/01 OK 1119 3 W 249 MESM-27 FB 10/30/01 2798.35 77 1114 OK FI 2809,84 OK 1204 75 10 128/01 250 SESM- 27FB 2833. 81 5W 1200 79 OK 10/30/01 SW. OK 74 10/30/01 0709 12396.59 251 ัรพ SALM-28 FB 10/31/01 4 U OK 0707 12420.54 5 4 3112. 0810 24 OK 10/30/01 252 CHUM - 28 FB 3135.94 0752 Ci 10/31/01 OK

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MFM Used # 5346

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Project: MIC Ambient Air Monitoring in Monterey & Santa Cruz Counties

	•		Pr	oject#:P-	01-004 On Flow:	75 +2001	Leak	Comments		Initial
_og	Sample	Sampler	Date	Time	Counter	Flow On	On		K,P,C,F&R	On C
#	Name	ID	On	On	On		Off	· 医肾 经总统基本等 计图 [2]	On Off	
		Number	Off	Off	Off	Off			R	JW/
			10/30/01	0913	1986.03	75	OK		X	130
	LJEM-28FB	L	10/31/01	0848	2009.61	<u> 73</u>			R	JW/
77	Loch do lo	•	10/30/01	1024	4366.99	77	OK	POWER OUTHGE? (4 HR)		/3
254	PMSM-28 FB	Kı	20/31/01	0941	4386.27	7(0/5		RI	34
	T/113/11-43.5		10/30/01	1157	2798.40	76	OK OK			13
2.5.5	MESM- 28 FB	FI	10/31/01	1033	2821.66	75	0K			701
	,,,,	AI	10/30/01	1210	2833, 94	74	OK		1	1/3
256	SESM-28FB	ĠN	10/3/101	1115	2857.0a	75	OK		K =	Ofco
			11/4/01	0645	12420.92	73	06		1 - T	The City
157	5ALM-29 FB	MI	11/5/01	0641	12470.92	75	OK		KE	000
	,		11/4/01	0645	12 445.66	75	OK.		+ -	7
258	SALM-29 FBC	II/	11/5/01	6750	3/36.13	76	QK	HELICOPTER STRAYING MONTH	KE	Cao
			11/4/01	0800	3160.30	81	OK	300 m (WIND FROM EAST)	 	A
259	CHUM - 29FB	C1	11/4/01	0750	3/36./3	76	OK	11	K	Car
	22	۱۸/	11/5/01	98//	3160.48	69	OK			000
26 o	CHUM- 29FBC	101	11/4/8/	0848	2010.06	76	CK_		5 oc	
9/4	1952	111	11/5/0/	0919	2034.55	74	OK		1,/	Of a
161	LJEM-29FB	1-	11/4/01	0848	2010-06	75-	OK	4	1500	· //
7/2	LJEM-29 FBC	JI	11/5/01	0908	2-34.38	77	OK		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	90
人名人	2 4 47 5 7 7 50	1	11/4/01	0944	4483.32	77	OK	- 	K	100
263	P895M - 29 FB	K/	11/5/01	104.	4568.24		OK		10	not.
<u> </u>	1-011-1-1		11/4/01	0944	4483.72	76	OK		KK	1070
264	PMSM-29FBC	BI	11/5/01	1029	4568-07	75	OK		KK	CIPO
<u> </u>			11/4/01	1057	2846.78	75	OK		12 12	10
265	MESM-29FB	FI	11/5/01	1150	2821.89	75	OK		15 K	Car
	1		11/4/01	1138	2846-58	77	OK			200
266	MESM-29FBC	El	11/5/01	114/	2857.23	76	OK		KK	do
		1	11/4/01	1234	9882.11	86	OK			(a/
267	SESM-29FB	G/	11/5/01	1141	N\$57.23	76	OK		150	COC
_ '	2-2	AI	11/5/01	1239	2882,19	78	OK		F	a96
268	SESM - 29FB		11/5/01	01 97	12445.24	76	OK	_	60	10
2/0	7.4.2 7.5.00	MI	11/6/01	0030	12 468.66	77_	OK		15/	OR
269	SALM-30FB	- '''		0715		1	+=	TRIP BLANK		- // -
276	5ALM - 30TB		11/5/01					ear, P = Partly Cloudy, C = \geq 75% Cloudy, F	= Fog. & R =	Rain (a

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Project: MIC Ambient Air Monitoring in Monterey & Santa Cruz Counties

Project #: P-01-004 On Flow: 75 +2ccm Off Flow: 75ccm +10%

Log	Sample	Sampler	Date	Time	Counter	Flow	Leak	Comments	Weather	
#	Name	ID	On	On	On	On	On	To the other the state of the s	K,P,C,F&R	On
	2.	Number	Off	Off	Off	Off	Off		On Off	
			11/5/01	0828	3/60.78	74	OK		F	cd/
271	CHUM-30FB	CI	11/6/01	0736	3/83.9/	78	OK		1	Oxcop
			11/5/01	0930	2034.75	76	OK.		P	UG.
272	LJEM-30FB	LI	11/6/01	6838	2057.88	75	OK		OC	XAP
			11/5/01	1055	4508.51	74	OK		K	09/
273	PMSM-30FB	KI	11/6/01	0956	4531.51	76	GK		· -	/ Car
			11/5/01	1001	2846.95	74	OK		K/	OG
274	MESM-30FB	FI	11/6/01	1117	2874.23	7.7	OK		100	ZC9/
			11/5/01	1306	2882.52	76	OK		[K	Olga
275	SESM-30FB	GI	11/6/01	12/6	2905.80	83	OK		OC	ZGP
			11/6/01	0641	12468.84	77	6K		05	Colon
276	SALM-38FB	MI	11/7/01	0617	12492.45	73	OK		OCP	Z
			11/6/01	0751	3184.15	75	OK		P	Cop
277	CHUM - 31 FB	CI	11/7/01	07/7	3267.59	76	4		F	
			11/6/01	0348	2052.05	75	OK		8C	CO
278	LJEM-31FB	<u>L1</u>	11/7/01	0835	2081.81	70	OK		K	1 (210
2 2	_	1	11/6/01	1000	4531.63	76	OK		05	CNO
279	PMSM-31FB	KI	11/7/01	0942	4555. 28	77	6K			
2.6	_	_	11/6/01	1135	2870.53	76	GK		OK_	09/00
280	MESM-31FB	FI	11/7/01	1056	2893.92	71	OK		K	<u> </u>
254			11/6/01	1996	2905.97	75	OK		05/1	CALLON
281	SESM-31FB	GI	11/7/61	1152	2929.41	72	6K		K	Nogr
20-			11/7/01	0676	12492.59	76	OK		P	Hoge
987	5ALM-32=B	MI	11/3/01	0609	13516.32	80	0/<	· · · · · · · · · · · · · · · · · · ·	K	70g/
		1 1	11/7/01	0727	7207.75	71	OK		F	W Cap
283	CHUM-32FB	CI	1/8/01	0657	3231-24	80	OK		K	Car
201		1	11/7/01	0844	2081.98	75	OK			(W/
284	LJEM-32FB	LI	11/3/01	0745	2104.98	76	OK			1.616
		\(\(\) \(\)	11/1/01	0952	4555.45	75	OK		K	do
082	PMSM-32FB	K _I	11/8/01		1978.45	77	oK_			200
201		₋	11/7/01	1107	2894.66	75	OK		K	dan
∂86	MESM-32FB	FI	11/8/01	1007	2917.06	80	OK		1 / A 1	/ Cg/
	5	ا ، ما	11/7/01	1201	2929.56	76	OK		K	chap
287	SESM-32FB	GI	11/8/01	/Xs (2952.56	74	οK			- Cap
,]		ļ			 			
	lood # = 2.77		Dago //				لسيسا	P = Partly Cloudy C = > 75% Cloudy F = F		

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APPENDIX IV

Field Data Sheets for Chloropicrin

Project: Chloropicrin Ambient Air Monitoring in Monterey & Santa Cruz Counties

Project #: P-01-004 On Flow: 90 ±2ccm Off Flow: 90ccm ±10% Counter Flow Leak Comments Weather | Initials Time Date Log Sample Sampler K,P,C.F&R on ID On On On On # Name On Off Off Off Number Off Off A STANSON SHIP A STANSON Off 112 9/8/01 0**6**48 90 11748.47 OK C SALL-1 M2 9/9/01 0645 95 OK 100 11772.42 92 9/8/01 0654 1748,57 OK IZ 90 SALL-155 9/9/01 01 0657 11772,62 002 92 9/8/02 **1730** 2464.53 OK a 104 1464 003 CHMF-1 02 9/9/01 OK FLOW 0728 2468.66 90 OK 0812 33172 9/8/01 CARTRIDER INSTALLED BKWDS. 9/9/01 0822 85 OIC 004 TIET-V) IDR 3/8/01 0902 OK 3/37.79 PINSI-1 K2 005 9/9/01 92 Ae OK 0913 2/8/01 92 2152.09 0942 OK A E1 9/9/01 0955 2176.30 MESL-015 006 F/c 9/8/01 218514 90 OK 1012 94 SESK-1 62 9/9/01 $\Gamma \delta \Omega$ 1032 2209.48 01 ___ 9/9/01 0708 SALL-ITB TRIP BLUNK 308 11772.56 91 9/9/01 0653 0 « SALL-Z 11796.30 009 MZ 0638 91 9/10/01 OK 89 9/9/01 0704 11772,73 OK SALL-2C A0 9/10/01 11796.57 90 010 IZ 0654 OK 9/9/01 2488.81 90 0747 DIC 96 CHUL- 2 D2 0740 2512.68 86 9/10/01 Oil 01 90 015 9/9/01 0757 2488.88 012 CH4L-2C 0740 C 2 9/10/01 2512.8668 014 9/9/01 91 OK 1363.08 0833 TRR LSRL-2 L2 88 013 0830 1.387.61 OK 9/10/01 AC B 19/01 90 OK 1363119 0839 1387.18 J2 9/10/01 1840 OK 90 9/9/01 0921 3137.93 616 AC KZ PMS 4 - 2 015 9/10/01 3162.06 0929 OK 89 01 0933 3138.12 9/9/0/ PMSL-2C 016 BZ 9/10/01 0939 3162,22 04 9/9/01 91 1003 2176.44 OK MRSL-2 E2 OK 017 1067 2600.51 9/10/61 91 OK 1009 2176.56 89 7/9/61 F2 MESL-20 OK. 89 2/10/01 1020 2200,73

00085

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Project: Chloropicrin Ambient Air Monitoring in Monterey & Santa Cruz Counties

Project #: P-01-004 On Flow: 90 +2ccm Off Flow: 90ccm +10% Counter Flow Leak Comments Sample Sampler Date Time Weather Initials Log K,P,C,F&R On On # Name ID On On On On Off Off Off Off Off The sale and the sale Number 9/9/01 1041 2209,63 OK 6-2 019 SKSL-2 89 OK 2233.78 9/10/01 1050 9/9/01 1046 2209,72 OK 565L-2C AZ 9/10/01 1058 2233.92 20 OK 80 9/9/01 1056 TripSRIX-021 SESL-2TS 11796.44 90 0646 OK 9/10/01 SALL-3 MZ 0639 022 9/11/01 11820.32 90 OK 9/10/01 90 0743 2512.73 OK 0.2 99 OK 023 ICHUL-3 9/11/01 0729 2536:51 0832 90 1287.05 OK 9/10/01 L2 1410.91 OK 024 9/11/01 0823 12E1-3 90 0932 3162.1 04 9/10/01 025 1PMS L-3 9/11/01 0926 3186.01 92 OK K2 9/10/01 1016 2200,66 OK E2 89 026 MESL-3 2224.65 OK 9/11/01 1016 9/10/01 1052 1233,82 OK K SEZF-3 62 9/11/01 93 027 2257.85 OK 1054 9/11/61 11820.45 OK 0647 12 028 11824.42 91 SALL-Y 9/12/01 0645 OK TRACE RAIN 9/11/01 90 OK HIGH FLOW 0738 2536.67 029 CHUL-4 0734 2560,60 02 9/12/01 100 OK HEAUYOUERCAST ON COASTAL KANER 90 9/11/01 1411.07 OK 0833 LJEL-4 L2 96 OK 030 9/12/01 0829 1435.01 0936 90 DK 3 186,15 9/11/01 KZ PMSL-4 3209.87 031 0918 OK 9/12/01 29 90 1023 2224.79 9/11/01 OK MESL-4 62 032 0956 2248,33 87 9/12/01 OK POSSIBLE MOISTURE INSIDE CARTRIBLE Ac 9/11/01 1107 2258.08 89 OK SESL-4 62 033 90 9/12/01 1037 2281.56 OK awi. 90 DK 9/17/01 0645 11844. 57 034 SALL-5 WZ 9/18/01 0623 25 OK 0725 OK 9/17/01 2560.77 60 CHUL-5 035 Ca 016 0709 2584.33 9/18/01 Jus. 1435, 21 90 0810 9/17/01 OC OK LJEL-5 036 1461 = 77 1015 OK

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Project: Chloropicrin Ambient Air Monitoring in Monterey & Santa Cruz Counties

Project #: P-01-004 On Flow: 90 ±2ccm Off Flow: 90ccm ±10%

Log	Sample	Sampler		Time	Counter	Flow	Leak	Comments	Weather	Initials
#	Name	ID	On	On	On	On	On	Secretary and the second secretary and the second secretary	K,P,C,F&R	On Off
1,24	Marinet USA	Number	Off	Off	Off	Off	Off		On Off	ROMP'S
	000		9/17/01	0858		90	OR	·	06	JW
037	PMSL-5	KZ	9/18/01	1102	3355.63	91	Ole		<u> </u>	AC
038	MESL-5	<i>-</i> 3	9/17/01	0923	2248.48	91	OK		05/	JW
0,58	MC3L-3	EZ	9/18/01	1135	2274.72	89	010		C	AR
039	SES1-5	Ga	9/17/01	0945	2281.76	90	0人		00	30/
021	3032 3	00	9/18/01	1209	2308.21	89	0<		00	AC
040	SALL-5 TB		9/18/01			_	_	TRIP BLANK	0	5 W
10,0	3.7.2		9/18/01	0636	11868.46	90	OK .	, , , , , , , , , , , , , , , , , , ,		
041	SALL-6	MZ	9/19/01	8721	11893.20	90	OK		FF	JW
			19/8/19	0641	11868-55	90	OK			A
042	SALL-6C	Z2	9/19/01	0730	11893.34	91	OK		F	JZW
4(3	C1444 /	<i>a</i> -	9/18/01	0722	25847	90	øk		P	AR SW
043	CHUL-6	CZ	9/19/01	0800	2609.39	83	OK		<i>-</i>	/3W
2000	CHUL-6C	> 2	9/18/01	0727	5284.84	91	06			Ae/
044	CHOLOGO	D2	9/19/01	0807	2609.47	95	OK		F	2 M
045	LJEL-6	L2	9/18/01	1027	1461,53	₹90	OK	. '	CF	Ae
10 15			9[19(01	1031	1484.53	89	OK	·		/3W
046	LJEL-6C	52	9/18/01	0935	1484.63	92	OK		CE	Ac
- /~			9/18/01	1/12	3355.62	91	OK			23W
047	PMSL-6	KZ	9/19/01	1115	3378.80	91	改		C/c	4534
			9/18/01	1115	3355.85	89	OK		C	AR
048	PMSL-6C	132	4/48/01	1020	3378.88	90	0人		<u> </u>	Ju
0.00	44.001		9/18101	1144	2274.87	90	OK		C/2	4
044	MEST-6	E2	9/19/01	1045	2297.84	89	0/=		<u></u>	1/3W
امحا	MESL-6C	(1)	9/18/01	1147	2274.91	91	6K		c/a	4
050	MEDE OF	FZ	9/19/01	1048	2297.89	93	0大		C	
100	SESL-6	G2	9/18/01	1219	2308.39	89	OK		CPC	AS/
051			9/19/01	1127	2331. 47	76 89	OK	LOW FLOW		25W
052	SESL-6C	AZ	9/18/01	1127	2308.51	86	OK		Sec	195W
		110	9/22/01	0650	11893.50	X9	0/5			5 m/
053	SALL-7	Ma	4/23/01	0639	11917.32	90	OK		FC	JW
	C		8/22/01	0733	2609.58	91	吹人			Jui/
054	CHUL-7	CS	9 23 01	0737	2633.62	83	OK		5 c	15/47
			D 7	25 15	101	1 1		D = Dorthy Cloudy, C = 5 750/ Cloudy, E = E-	* 0 D - D	

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Project: Chloropicrin Ambient Air Monitoring in Monterey & Santa Cruz Counties

Project #: P-01-004 On Flow: 90 +2ccm Off Flow: 90ccm +10%

		72		roject#: F		<i>r</i> : 90 +2cc		Flow: 90ccm ±10%		
Log	Sample	Sampler	I .	Time	Counter	Flow	Leak	Comments	Weather	
#	Name	סו	On	On	On	On	On		K,P,C,F&R	On On
	in the way of the said	Number	Off	Off	Off	Off	Off	有对。 是这一次是一个	Off Off	
	7	-	9/22/01	0823	1484.78	90	OK	- 10 -66/5	F /	34/
055	LJEL-7	La	9/23/01	0836	1508.59	91	0/5	FOUND A.C. OFF (RUNTIME = 23.75)	/ c	/JW
	0		9/22/01	०९२०	3449.90	91	OK		PC	JW/
056	PMSL-7	Ka	9/23/01	0929	3474.04	93	OK		<u></u>	/w
AC7			9/22/01	1029	2298.03	89	0/0		PC	7 W/
057	MESL-7	Ea	9/23/01	1026	2321.87	90	0K		PC	/5W
058	SESL-7	6-2	9/22/01	1102	2331.60	90	OK		PCPC	305
0.28	202F i	Ga	9/23/01	(103	2355.62	93	OK			15W
059	SALL-8	Ma	9/23/01	0648	1/917.48	90	0人	•	5/6	JW/
031	ンバリレーリ	771 00	9/24/01	0645	11941, 41 2633.19	87 90	OK			15W 25W
060	CHUL-8	ca	9/24/01	0748	2457.67	89	OK		5/2	2m/2m
	- 7 - 0		9 23/01	0845	1508.74	90	の大		<u> </u>	3W/
061	LJEL-8	La	9/24/01	0834	1532.65	91	OK		\c\c\	300
			9/23/01	0938	3474.18	90	OK			3w/
062	PMSL-8	Ka	9/24/01	0944	3498.29	92	OK		C/c	J. 5hr
			9/23/01	1027	2322.01	90	OK		PC	<u>5</u> w/
063	MESI-8	Ea	9124101	1028	2345.99	91	OK			JW.
	0		9/23/01	1110	2355.74	91	OK		PC	5W/
064	SESL-8	Ga	9/24/01	1112	2379,77	92	OK		100	JW.
		MA 70	9/24/01	0652	11941, 53	90	ok		< /	1m/
065	SALL-9	Ma	9/25/01	0653	11968.58	88	0K	RAINED GUERNILHT		ROP
₅₆₁	CHUL-9	ca	9/24/01	8450	∂65 1 7.80	90	OK	u/		JU)
066	CHULCI	٠٩	9/25/01	0749	2681-84	79	OK	•	(F)	Jagr
067	LUEL-9	LZ	9/24/01	0850	1532.83	90 86	0K	Ŋ	CK	WE
001		<u> </u>	9/25/01	0952	3498.42	90	OK			<i>/07.</i> ₽ 7₩/
068	PMSL-9	Ka	9/24/01	0956	3512.52	80	OK	V	X	Dap
	•		9/24/01	1037	2346.16	90	OK			30
069	MESL-9	Ea	9/25/01	1051	2370.17	87	OK	•	K	1000
			9/24/01	1120	2374.90	90	ok	TIME ON = 2379, 90		335
070	SESL-9	GZ	9/25/01	1/27	2464.03	87	64		K	1691
	6 44 - 45		9/25/01	0767	11965.79	90	OK			~/
071	SALL-10	ma	9/24/01	0638	11989. 31	89	OL	factore) are	C/K	9/5W
	C4. 12 EC			0714	11965.91	90	OK			01/500
072	SALL-10 FS	IA	9/24/01	0647	11989,46	89	OK			
	Land H. C. Zita		Dogo II	of 15-	1A74b-	<i>K</i>	_ <u> </u>	P = Partly Cloudy C = > 75% Cloudy E = Eo	- 0 D - D-	: (·)

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Project: Chloropicrin Ambient Air Monitoring in Monterey & Santa Cruz Counties

Log	Sample	Sampler	Date	Time	Counter	Flow	Leak	Comments	Weather	Initials
#	Name	ID	On -	On	On	On	On		K,P,C,F&R	On
ý	in Meagure alkace	Number	Off	Off	Off	Off	Off	建设工作 医多种性性	On	\$ 19 mg 1/2.
073	SALL-10TS		9/25/01	0612			=	TRIP SPIKE		54
074	SALL-10 TB	1	9/25/01	0 <u>61</u> 2				TRIP BLANK	K	501
075	CHUL-10	ငဍ	9[25101 9[26[0]	0758 0744	2681.98 2705.72	90 91	OK		FK	92/5W
۵۲6	LJEL-10	La	9/25/01	0837	1557. 27	90	OK		KK	200
077	PMSL-10	Ka	9/25/01	0944	3522.74 3546.28	90 92	OK	•	KK	Offw
078	MESL-10	Ea	9)26101	1025	2370.34 2393.70	90	OK		KK	9/5W
079	SESL-10	Ga	9/25/01	1118	2404.18	91	OK			CITYW
080	5A LL-11		9/26/+1	0635	11989.61	90 93	OK		× PM	TW/
081	SALL-11C	IZ	9/26/61	0703	11989.72	93	OK		KYA	7W/
083	CHUL-11	12	9/26/01	0800 0733	2705.99	96	OK		X P	5W/
083	CHUL-11C	CZ	9/26/61	0756	270593	90	水水		KP	Jago
084	LJEL-11	L2	9/26/01	०८ ।।	1580.73	89 95	oK oK		/ F	34)
02	LJEL-11C		9/26/61	0848	1580.78	90 97 90	ok ok		F	200
086	PMSL-11	KZ	9/26/01	0950	3546.40 3569.57	98	OK		000	201/
087	PMSL-IIC		9/26/01	0954	3546.46	92	ok ok	· · · · · · · · · · · · · · · · · · ·	60	540
288	MESL-11	Ea	9/24/01	0943	2393.90 2417.03 2394.04	90 92 91	ok ok	MIATS! Adv. 111 a A	20	3W/
	MESL-/IC	F2	9/26/61	0951	2417, (6	(06	OK OK	MOTE: BALL IN ROTO METER WON'T GO ALL THE WAY DOWN - LEAK OK. DIR	& C	50 / 04"
090	SESL-11	62	9/26/01	1123	2451.08	94	0 K	D - D-th Claute O - 25% Ob - to 5	Kp	5W/

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Project: Chloropicrin Ambient Air Monitoring in Monterey & Santa Cruz Counties

Project #: P-01-004 On Flow: 90 +2ccm Off Flow: 90ccm +10%

T	C	C		roject # : I		v: 90 +2cci		Flow: 90ccm ±10%	14/41	In 241 - F
Log	•	Sampler	B.	Time	Counter	Flow	Leak	Comments		Initials
#	Name	ID	On	On	On	On	On		K,P,C,F&R	
Š.	Chart to like	Number	Off	Off	Off	Off	Off		Off	公司的张 克
			9/26/01	1127	2428.01	91	OK		K	Ju/
091	SESL-11C	A2	9/27/01	1038	2451.21	94	e K		P	1000
			9/27/01	0638	12013.50	96	OK	•	PA	car
092	5ALL-12	MZ	9/28/01	0655	1237,60	91	ok		K	CH SW
			9/27/01	0737	27 29.63	90.	OK		7	CYSW
093	CHUL-12	CZ	9/28/01	0729	2153.48	9a	OK		·/ K	
ł	i		9/27/01	0821	1604.37	90	σK		F	09/5W
094	LJEL-12	L2	9/28/01	ogeg	1628.14	91	8 R		<u>/</u> K	5W
.05	12	44.0		0911	3569.75	90	OK		05	ON 5W
042	PMSL-12	KZ	9/28/01	0848	3593.36		ok			
096		ا م	9/27/01	0956	2417.25	90	oK.		oc /	08/
016	MESL-12	E2	9/28/01	0922	2440.66	90	OK		K	875W
097	8 . 0 / . 12		9/27/01	1042	2454.27	90	OK		a /	ap/
0.7	Sest-12	Ga	9/28/01	0948	2474. 35	90	ok			7500
098				0.724	12637.86	9 4	0/<		F	01/2
078	SALL - 13	M2		0724	12061.96	93	οK		_ " ,	1000
099	54.1 1278	-	10/4/01	0702	 -				00	
'	SALL-13TB		-/3/	A 0 11 /	2753,80	90		TRIP BLANK		
100	0,,,,,	C2	10/3/01	0814		83	OK		FOR	000
700	CHUL - /3	-	* * * * * * * * * * * * * * * * * * * *	0905	2778.01 1628.40	90	ok ok			1090
101	LJEL-13	12	10/3/01	0935		89	OK		00 OC	79/2
,,,	LUEL-13		10/4/01		1652.89 3714.56	91	OK			LOS
loa	PMS-L-13	KZ 1	10/3/4/	1035	3739-14	\$90	OK		OK	29/200
	,,,,,			1059	2441.06	91	OK			
103	MESL-13	E2	10/4/01	1/37	2415.68	90	OK		KP	2000
			-	1145	2474.61	90	OK			
104	SESL-13		10/4/01	1233	2499.41	87	OK		K A	YEJA
				0734	12062.13	91	OK		60	COP
105	SALL-14	M2		0735	12.85.12	92	OK		00c	OP
5	•			6746	12062.22	89	OK			
106	5ALL-14C	I2		0654	12085.46	102.7	OK		OC	Cole
	,		10/4/01		2778.22	91	OK		//	07/
107	CHUL-14	C2	10/5/01		2801.32	85	σK		OC OC	JOH
. 1					2778.34	91	OF			- / /
108	CHUL-14C	D2		0757	2801.49	97	OK		OC !	Tap
	sed# 5346		Page 6	of <u>15</u>	Weath	er codes: K	= Clear	, P = Partly Cloudy, C = \geq 75% Cloudy, F = Fo	g, & R = Ra	in (any)

Project: Chloropicrin Ambient Air Monitoring in Monterey & Santa Cruz Counties

				roject#:				Flow: 90ccm ±10%		
Log	•	Sampler	1	Time	Counter	Flow	Leak	Comments	Weather	
#	Name	ID.	On	On	On	On	On		K,P,C,F&R	On Or
"你说	Constitute and the	Number		Off	Off	Off	Off		Off	表心情感 之。
			10/4/01	0942	1653.00	90	OK		00	09/2/
109	LJEL-14	LZ	10/5/01	0855	1676-23	90	OK		OC	10/
			10/4/0)	0945	1653.06	91	OK	•	0	all
110	LJEL-14C	J2	10/5/01	09 07	1676-42	93	OK		OC	up
			10/4/01	1044	3734.30	89	OK		00	000
(1)	PMSL-14	K2	10/5/01	1004	3762.64	89	σK		OR	100/
		n 2	10/4/01	1049	3739.39	9/	OK		06	01/2
112	PMSL -14C	BZ	10/5/01	1014	3762.80	83	OK		/oc	100
112	11000 111	C2	10/4/01	1146	2465.83	89	OK	· •	P	Ofego
113	MESL-14	E2	1-15/01	1109	2489.21	87	ok		/oc	2090
	11.561 11/6		10/4/01	1155	2465.98	88	OK	4	P	Tar
114	MESL-14C	F2	10/5/01	1/28	2489.55	92	OK	ROTOMETEN BALL STUCK	Oc	yap
	SESL-14	62	10/4/01	1242	2499.57	91	ok		A	CO
112	3636-14		10/5/01	1230	2523.35	9/	01	ROTOMETER BALL STUCK	90	MODE
1	5E5L-14C	AZ	10/4/01	1249	2499.67	90	OK		1	000
116	3636-116		10/5/01	1247	2573.56		OK		100	70gr
1,7	5ALL-15		7.7	0702	12085.58	89 88	0(<		05	ass
11 /	SALL-IS			0805	2861. E3	91	OK		/oc	Vap.
110	CHUL-15			0746	2825.32	93	OK OK		oc oc	2000
110	C1/02 .5			0914	1676.54	89	6K			1
119	LJEL-15			0838	1699-95	90	OK		OCAL	Has
			10/5/01	1623	3762.95	89	OK		OK	
120	PMSL-15		10/6/01	0943	3786.28	92	oK	•	OC OC	dos
-	/ · · · · / · · · · · · · · · · · · · ·			1140	2489.74	90	OK			200
121	MESL-15			1043	2512.79	94	OK	<u>:</u>	OC 60	Hop
	7 - 3 - 1			1254	2523.77	91	OF			10/
122	SESL - 15			1156	2546.78	95	OK.	ROTOMETER BALL STUCK	05 OC	Son
			10/6/01	0650	12109.39	99	OK			11/
(23	5ALL-16	Ma	10/7/01	0641	12/33.24	90	OK	SCIENT DAZZLE	ec	04290
				0753	2875.44	91	OK			-
(24	CHUL-16			0735	2849-14	93	OK		F	Con l
				0846	1700.08	89	0/6		05	010
125	LJEL-16	LZ		0326	1723.75	91	OK		0000	2001
				3951	I186.42	90	OK			110
126	PM5L-16			0932	3816.09	90	OK		ac oc	1
	sed # 5346		Page 7				Z Classic	P = Partly Cloudy C = > 75% Cloudy E = Ea		

MFM Used #_5346

Project: Chloropicrin Ambient Air Monitoring in Monterey & Santa Cruz Counties

Project #: P-01-004 On Flow: 90 +2ccm Off Flow: 90ccm +10% Sample Sampler Date Time Counter Flow Leak Comments Weather Initials Log # Name ID On On On On On K,P,C,F&R Participant of the Control Off Off Off Off Off Number 10/6/01 2512.94 90 1052 OK OC 127 MESL-16 EZ 10/7/01 1019 2536-39 82 OK 29 10/6/01 2546.91 OK 1203 OK 128 SESL-16 10/7/01 62 \$570.31 87 1127 12133.48 90 tolulor 0706 OK 129 SALL-17 M2 10/12/01 0647 12157.14 90 014 130 SALL-17TS 10/12/01 TRIP SPIKE 0700 (3) SALL-17 TB TRIP BLANK 10/12/01 0702 Ac 90 tolillo 1 0716 12133.62 OK 3M LK SLIGHT LEAK COULD NOT GET GOOD SEAL AT TURK 132 SALL-17 FS I2 10/12/01 0705 12157.46 88 2849.37 90 NEARBY PAULING ROAD OK 10/11/01 0812 97+16 HIGH ENDS FLOW 133 CHUL-17 10/12/01 0814 2873.40 C2 OK 10/11/01 0909 1723.98 40 OK 00 LSEL-17 OK Ĺ2 10/12/01 0920 1748.18 10/11/01 10 03 3906.65 90 OK oc. 135 PMSL-17 K2 3931.00 87 10/12/01 1025 OK 90 2536.50 OK 10/11/01 1053 R E2 MESL-17 10/0/01 88 1361 1108 2560.75 OK 10/11/01 1129 90 2570.54 OK G-2 137 SESL-17 1150 10/12/01 2594.89 OK TRACTOR DISCING FIELD ACROSS STREET 10/12/01 0721 12157,71 91 OK 138 | SALL-18 10/13/01 0644 M2 12181.09 88 OK 10/12/01 0728 12157.83 90 OK I2 139 SALL-18C 0657 12/8/1 20 87 OK 10/13/01 10/12/01 0828 2873.64 91 se OK CHUL-18 OK CZ 93 10/13/01 0800 2897.16 Ae 140 10/12/61 0835 2673, 75 01

OK

OK

DK

OK

OK

91

90

1033 2931:15 10/12/01 OK 144 PMSL-18 K2 OK 3954.87 10/13/01 1017 Page 8 of 15 MFM Used # 5346

2897.34

1748.40

1771.29

1748.49.

1771-48

10/13/01

10/12/01

10/13/01

10/12/01

10/13/61

0810

0934

0909

0939

0920

D2

L2

TZ

0009

CHUL-18C

142 LJEL-18

143 LJEL-18C

Weather codes: K = Clear, P = Partly Cloudy, C = > 75% Cloudy, F = Fog, & R = Rain (any)

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Project: Chloropicrin Ambient Air Monitoring in Monterey & Santa Cruz Counties

Project # : P-01-004 On Flow: 90 +2ccm Off Flow: 90ccm ±10%

			Pr		-01-004 On Flow:	90 +2ccn		Flow: 90ccm ±10% Comments	Weather	Initials
Log	Sample	Sampler	Date	Time	Counter	Flow	Leak	Comments	K,P,C,F&R	
#	Name	ID	On	On	On	On	On			
自然發養	S. L. S. L. Martin - M. B. S. G. S.	Number	Off	Off	Off	Off	Off		. Off	200514.3
- 740,1102,944			10/12/01	1038	3931.2 3	91	OK		KK	AC
145	PMSL-18C	B2	10/13/01	1027	3955.04	90	OK			
			10/12/01	1119	2560.94	91	6K	•	K	As/
146	MESL-18	EZ	10/13/01	1115	2584.87	90	OK		/ K	A
•			10/12/01	1125	2561.07	90	01		(C/K	AP/AC
147	MESL-18C	F2	10/13/01	1124	2685,02	96	OK	TRACTOR DISCING FIRED ACROSS STREET	K	
			10/12/01	1214	2595.30	91	OK	TRACTOR DISCIPLE TIELS TICKED	R	AC
148	SESL-18	62	10/13/01	1204	2619.13	91	OK	TRACTOR DISCING FIRED ACROSS STREET		
		^	10/12/01	1220	2595,39	91	OK	TRACTOR SISCIPLY NEEDS STREET	KK	AR
149	SESL-18C	A2	10/13/01	1214	2619.29	87 89				se
			10/13/01	0704	12181.42	87	OK		KK	Ac
150	SALL-19	MZ	10/14/01	0658	12205.32	90 89	0K OK		K	AL
	# 1(1.1 1 #	امما	10/13/01	0821	2897.52 2921.07	93	0K		, w	MAC
151	CHUL-19	C2	10/14/01	0754		90	OK		K/	
	4	, ,	10/13/01	0929	1771.62	92	OK	·	/w	AR AK
152	LJEL-19	<u>L2</u>	13/14/01	0850	3955.16		0/5		~	e
1,450	10mc 1 10	K2	10/13/01	0944	3978.32	91	OR		// K	140
153	PMSL-19	~~	10/13/01	1133	2585.17	89	OK		K	#/1
.01	MESL-19	EZ	10/14/01	1046	2608.39	90	OK		X	1/1/2
154	M427.11	RL	10/13/01	1223	2619.45	91	04	TRACTOR DISCING FIELD ACROSS STREET	K/	A.
155	SESL-19	62	10/14/01	1131	2642.57	91	OK		/ K	<i></i>
133	242F-11		10/14/01	0706	12205.45	90	OK		K	Ae/
156	SALL-20	M2	10/15/01	0608	12228.49	91	OK		K	1
130	71122 20		10/14/01	0804	2921.24	89	OK		w	AR.
157	CH4L-20	02	10/15/01	0804	2944,24	97	OK		I'S	* -
 			10/14/01	0858	1795.11	90	OIC		W	AR 10
158	LJE1-20	L2	10/15/07	0758	1818-11	92	OK		K	Ae
			10/14/01	0952	3978.45	91	OK		1/6	Al se
159	PMSL-20	K2	10/15/01	0852	4001.45	93	OK	<u> </u>		
 			10/14/01	1054	2608.52	91	OK		KK	AL AR
160	MESL-20	E2	10/15/01	0954	2631.52	72	01<			////
1 .			10/14/11	1137	2642.68	89	OK	TRACTOR DISCING FIREID ACROSS STREAM	KK	De
161	5556-20	62	10/15/01	1037	2665.68	93	OK			JR O.
	1 (1)	h> n	10/19/01	0642	12228,66	80	OK-		F	Re
162	SALL-21	M2	10/20/01	0621	2252.30	90	OK	B = Borth, Cloudy, C = > 75% Cloudy, E = 5		
	Used # <u>57346</u>		Page _ 9	_ of <u>15</u>	. Weath	er codes:	k = Clea	ir, P = Partly Cloudy, C = \geq 75% Cloudy, F = F	og, a 11 – 11	um (any)

Project: Chloropicrin Ambient Air Monitoring in Monterey & Santa Cruz Counties

		•		Pr	roject#: F	P-01-004 On Flow	v: 90 +2cci	n Off	Flow: 90ccm ±10%		
ſ	Log	Sample	Sampler	Date	Time	Counter	Flow	Leak	Comments		Initials
1	#	Name	ID	On	On	On	On	On	The second secon	K,P,C,F&R	On Off
	()	To all country could be	Number	Off	Off	Off	Off	Off		Ort	中部的疾患
ı				10/19/01	0651	12228.81	88	OK		F	RR
- 1	163	SALL-21C	T 2	10/20/01	0636	12255.56	85	OX		1/ [THE
ı				10/19/01	0740	2944,29	90	OK	Full of water.	F	182
	164	CHUL-21	C2	10/20/01	0731	2968.14	3 *	OK	Oried + Scaled	F	JUR.
- [10/19/01	0747	2944.40	91	OK	Full of worker	F	He /
	165	CHUL-210	12	12/20/01	0742	2968.32	0 *	OK	Dried + Sealed	/ F	TRE
١,			in	10/19/01	0835	1818.16	92	OK		PC	HC 100
Ļ	ططا	LJEL-21	L2	10 120 01	0848	1842.39	86	OK			- WK
l.		170. 6.	- ·	10/19/01	0842	1818.27	91	OK	• 🕏	17/0	IRP .
- μ	67	LJEL-21C	72	10/20/01	0904	1842.65	88	OK		P	SAR
- 1,	110	BIN	1	10/19/01	0928	4098.03	91	OK		0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
H	168	SESL-21	K2	10/20/01	0951	4122 42	90	OK	λ		IRR I
	1/2	PM SESL-21C	B2	10/19/01	0935	4098,16	91	0X		P	TAK
1	101	DE2F-510	DZ.	10/19/01	1003	4122.65	88	AV	Bell sticks about 20 on retampter		W
	170	MESL-21	F2	10/14/01	1009	2656.15	8~1	9X-4	Pour I (10k) was a	CA	TRR
-	1.10	MICO CO SE I	1 -	10/19/01	1013	2631,70	20	OK	Looks + cotomotor has water	L 1 1	IR TY
	171	MESL-21C	E2	10/20/01	1054	2656.32	187		No visible water.	0	TRR
-	- 1			10/19/01	1052	2665.78	80	OVE	Bah stude Ox Bottom. Cleaned.	2	IRA
١	172	SESL-21	62	10/20/01	1141	2690.59	73*	MO	Water	P	71K
				10/19/01	1100	2665.91	90	OK		c /	RL/
	[73]	SESL-21C	A2	10/20/01	1151	269075	-86	OK		P	JKK.
				10/20/01	0630	12252.47	89	OX	No.	F	K/
	174	SALL-12	M2	10/21/01	0622	12276.32	92	OK			JJK.
Π.			<i>c</i>	10/20/01	0804	2968,69	2.5070		samples blew over. When?	P	JR 100
	75	CHUL-22	C2	10/21/01	0742	2992.32	86	ÚK.		C	JAR
٠l,	n. 1	1000		10/20/61	0850	1842.56	80	017		P	JABIA
17	116	LJEL-22	12	10/21/01	0854	1866.47	90				W W
		Shi Ci an		10/20/01	1000	4122.57	-189	0/2		1 c	MOD
91	רנו	(MSL-22	Kr	10/21/01	0952	4146.244	94	OK	Boll stick, @ about 20 on returnts,	·	
4	78	MESL-22	F2	10/20/01	1109	2656.57	93	OK	the second of the contraction to the test of	P C	IPS TR
7	10	WVL 3-2-2		10/21/01	1043	2680.14 2690.89	90	OK			
(2)	199	SESL-22	A2	10/20/01	1133	2714.45	92	OK		r c	W IRE
1	* * 1			10/21/01	0632	12276.49	90	OK			JO2
1	181	SALT-23	M2		0600	12299,96	87	OK		c	SAC
		Jsed # 5346		Page 10					, P = Partly Cloudy, C = ≥ 75% Cloudy, F = F	og, & R = Ra	in (anv)
	•									-	. ,

Project: Chloropicrin Ambient Air Monitoring in Monterey & Santa Cruz Counties

				Project: C	Diotobiciii	Ambient Air Work	B.IIIOII	Off F	Flow: 90ccm +10%		
		· ·				01-004 On Flow:	Flow	Leak	Comments	Weather	Initials
Г	Log	Sample	Sampler	Date	Time	Counter		On		K,P,C,F&R	On Off
	#	Name	ID	On	On	On	On	Off		On Off	**********
7	A sulfa		Number	Off	Off	Off	Off		1 2 2 2	2	JAL
F	099599			10/21/01	0755	2992.53	91	OK	Ciliconal top of minshield	/ r	/1KV
1	101	CHUL-23	C2	10/22/01	0722	3016.00	96	OK-			TRE
┢	01	VIIII ~=		10/21/01	0902	1866.61	90	OK	•	e c	TRUE .
1	00	LJEL-23	L2	10/22/01	0829	1890.06	90	ÖK		-	199
ľ	<u> </u>	LUDE 27	-	10/21/01	1001	4146.38	92	OK		ا ے سرا	/ JKK
- 1	82	PM52-23	K2	10/22/01	0926	4170.01	93	OK		C	MR IRR
ľ	03	1 140 2 23		10/21/01	(153	2680,30	90	OK		₽	
1	84	MESL-23	F2	10/22/01	1012	2 -07-3 2703.62	93	OK		C /11	Ill
-	31			10/21/01	1142	2714.61	30	81	#	K	
1	85	SESL-23	A2	10/22/01	1028	2737.88	91				JR
ŀ				10/22/01	0608			·	Trip Blank		
	186	SALL-24TB				1,60,00,01	90	OK		c/2	ARRIAR
			3.4.22	10/22/01	06/6	12300,21	87	OK		F	JAKR J
	187	SALL-24	M2	10/22/91	0628		92	OK		(E-	AR R
ſ	100		Co	10/22/01	0719	3016.13	92	015		K	100
L	188	CHUL-24	C2	10/23/01	0839	1890:22	90	OK		CF	TOR MR
1	1 Parc	17-1 64	12	10/23/01	0805	1913.66	89	OX			
L	184	LJEL-24	 ~~	10/22/01	0935	4170.15	90	OK		F	TRR
1	10.0	מנה נה מו	K2	10/23/01	0848	4193.37	91	OK			R
ŀ	10	PMSL-24	1 ~~	10/22/01	1021	1703.17	91	OK		P	/ NAD
į	la i	MESL-24	F2	10/23/91		2726.83	93	UF			W W
ŀ	191	MESHAL	+	10/22/01		2738,04	90	0 K	 	KK	W
ı	100	BESL-24	A2_	10/23/01	1009	2761,05	93	OK		c	Tu
ŀ	192	IS ES E &C	112	10/27/01	07/9	12324.75	91	OK		1/P	JWZW
l	193	SALL-25	Ma	10/28/01	0705	12348.52	93	OK		C/0	JW
	112	SALS		10/27/01	0727	12324.88	90	OK	4	1//	1/3~
	194	SALL-25C	TA	10/28/01	0714	12348.67	88	0人		C	5W 5W
				10/27/01	0811	3040.26	90	OK	-	P	1
000	195	CHUL-25	ca	10/28/01	08(0	3064. 24	97	OK		C	JW/
-				10/27/01	0820	3040.41	95	OK		P	130
60	196	CHUL-25C	DA	10 38 01	0823	3064, 46	90	OK		P	754/
5			1	10/27/01	0902	19/3.85	90	OK		P	3 0
	197	LJEL-25	La	10/28/01	0905	1937.90	90	OK		PP	13M
				10/27/01	0909	1913.97	1011	AL	1 ·		754
		LJEL-25C	72	10128101		141	her codes:	K = Cle	ar, P = Partly Cloudy, C = \geq 75% Cloudy, F =	Fog, & $R = F$	tain (any)
	MFM	Used # _ 5346	-	Page 11	of15				·		

Project: Chloropicrin Ambient Air Monitoring in Monterey & Santa Cruz Counties

Project #: P-01-004 On Flow: 90 +2ccm Off Flow: 90ccm +10%

_	·					2-01-004 On Flow			Flow: 90ccm + 10%	Macther	I Imidia I -
-	Log		Sampler		Time	Counter	Flow	Leak	Comments	Weather	
L	#	Name	ID	On	On	On	On	On		K,P,C,F&R	
	7.0	St. Burner St. Co.	Number	Off	Off	Off	Off	Off		Off	4 4 4 6
Γ				10/27/01	0959	4290.57	90	OK		PD	34/
1	199	PMS L-25	KA	10/28/01	1011	4314.75	87	OK		PP	500
Γ				10/27/01	1007	4290.69	90	OK		P	54/
6	300	PMSL-25C	Ba	10/58/01	1024	4314.98	95	OK		P	JW
Γ				10/27/01	1041	2727.06	91	OK		PP	2W/
Ŀ	301	MESL-25	FZ	10/28/01	1101	2751.39	91	OK		<u> </u>	JW
1	200			10/27/01	1048	2727.18	90	改		PP	5W/
1	202	MESL-25C	Ea	10/28/01	1114	2751,60	92	OK			5W
	242			10/27/01	1129	2761.25	90	OK		PP	JW
Ľ	×0.3	SESL-25	ితిన	10/38/01	1/47	2785.56	90	OK			34
1.		c=. 25-	40	10/27/01	1138	2761.41	90	ok		PP	200
2	504	SESL-25C	AZ	10/28/01	1157	2785.7a		OK			7 2 5
١.	305	CALL-31 TR		10/28/01			-		TRIP BLANK	c/	Jow
٢	(05	SALL-26 TB	_	10 2 3101				-	TRIF GLANK		
۵	206	SALL-26TS	_	10/29/01					TRIP SPIKE	2	1500
F	-	JALL AV 12		10/28/01	0724	12348.83	89	OK	771, 27 RC	P	564
Ŀ	707	SALL-26 FS	Ia	10/29/01	0713	12372.65	88	OK	FIELD SPIKE	C	5W
-				10/28/01	0729	12348.93	89	OK		P	5W/
Í	208	SALL-26	M2	10/29/01	0722	12372.80	96	OK		ر' د	13W
T				10/28/01	0817	3064.36	90	OK		P	301
6	109	CHUL - 26	ca	10/29/01	०४२०	3088.41	9.5~	ok		, c	JW.
Г				10/88/01	0911	1938.00	89	OK		P	JW
6	210	LJEL-26	La	10/29/01	0922	1962.18	95	OK		, c.	JM
			1	10/28/01	1018	4314.87	91	OK			3W/
Ŀ	211	PMSL-26	Ka	10/29/01	1028	4339.05	91	OK		/ c	/sw
╻			_	10/28/01	1108	2751.50	89	OK		PC	3/53
?!≏	212	MESL-26	Fa	10/28/01	414	3775.61	90	0/5			500
⇉.				10/28/01	1153	2785.66	90	0/C		PP	300
3	113	3E51-26	G2	10/29/01	1159	2809. 76	90	OK		'	
٦.	ا یی	8ALL-27	ma	10/29/01	0729	12372. 92	92	0/2		CR	5W/3W
2	214	DATE ~ 1	//\a	10/30/01	0705 0829	3088.56	91	a K			3W/
1.	أجرر	CHUL-27	ca	10/30/01	0806	3112.17	4,	OK		R	3/5W
P	-10	LHUL-A /		10/30/01	0930	1962.31	89	0K			JW/
ءَ	16	LIEL-27	La	10/30/01	8090	1985.96	95	0 %		R	75W
Ľ			- 0	10/20/01		1702,70			P = Partly Cloudy C = > 75% Cloudy E = E		

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Project: Chloropicrin Ambient Air Monitoring in Monterey & Santa Cruz Counties Off Flow: 90ccm ±10% Project #: P-01-004 On Flow: 90 +2ccm Weather Initials Comments Leak Flow Counter Time Date Sampler K,P,C,F&R Sample Log On On On On On ID Name # Off Off Off Off Off Number 89 OK 4339.15 1034 10/29/01 R 72 叹人 4362.92 1020 10/30/01 al7 PMSL-27 Ka 89 OK 2775.73 1121 كمناك 10/29/01 R 91 OK 2198. 35 1114 218 10/30/01 Fa MESL-27 SAMPLE FILL EDWI WATER 40 OK 2809,87 1206 10/29/01 ,Xe 2833.81 * 0 1202 219 GA 10/30/01 SESL-27 JW. R 91 OK 12396.59 0709 K 10(30)01 89 OK 0701 12420.54 ma 10/31/01 aaol SALL-28 JW) OK 91 3112. 24 0810 10/30/01 108 OK 3135.94 0752 Ca CHUL- 28 10(31/01 aai ركناك 91 OK 1986.03 0913 10130101 OK 92 084 x 2009.61 La 10/31/01 LJEL-28 501 aaa 91 OK 4366.99 (4 HR) 10130101 1024 POWER OUTAGE ? 30 91 OK 0941 43 86. 27 223 Ka 10/31/01 PMS L-28 504 吹 11250 2798.40 10/30/01 1117 **15W** 93 OK 2821.66 Fa 1033 10/31/01 224 MESL-28 89 2833.94 OK 1210 AZ 10/30/01 3W 84 OK 2857.02 1115 SESL-28 10(31 (01 225 OK 90 12420.92 0645 11/4/01 96 OK 12444.87 0642 M 2 11/5/01 ک و و 5ALL - 29 12420-92 90 OK 11/4/01 0645 OK 80 0655 12 445. 08 11/5/01 5ALL - 29C I 2 227 HELICOPTER SPRAYING 100M 88 OK 3136.13 0750 11/4/01 ROTOMETER FILLED COTTH WATER 89 GK 3160.33 0802 C 2 11/5/01 CHUL - 29 8GB 90 08 3136,13 11/4/01 0756 -0.8 02 3160.59 0817 11/5/01 229 CHUL -29C OK 88 2010.66 11/4/01 0848 OK 94 2034,59 L2 11/5/01 0926 730 LJEL - 29 a< 0848 2010.06 11/4/01 OK 20.34.40 0916 Ja 1/5/01 LJEL-29C 231 OK 90 0944 4483.32 11/4/01 PMSL OK 4568.26 Ka 1041 1=JEL - 29 232 OK 4483.32 89 0744 OK

101

95

106

ÙΚ

OK

4508.10

28.21.89

28. 46.82

WESK-AS MFM Used # 5346

PMSL - 29C

233

Ba

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11/4/01

1031

105 1

1152

Project: Chloropicrin Ambient Air Monitoring in Monterey & Santa Cruz Counties

Project #: P-01-004 On Flow: 90 +2ccm Off Flow: 90ccm +10% Weather Initials Comments Flow Leak Counter Time Date Sample Sampler Loa K,P,C,F&R On On On On On ID Name Off White Off Off Off Off Off Number OK 2821.39 91 11/4/01 1057 OK 87 1141 2846.62 EZ 1115/01 235 MESL-29C 90 DK 2857.23 11/4/01 1141 OK 85 G2 1236 2882.14 11/5/61 236 SESL-29 90 OK 2857.23 11/4/01 1141 93 OK 1240 2882.20 A2 11/5/01 237 SESL-29C OK 12445.29 91 11/5/01 0707 12468.70 94 OK 1632 Ma 11/6/01 238 SALL-30 11/5/01 0715 TRIP BLANK 239 SALL-BOTB 90 OK 3/60.78 11/5/01 0828 6 K 3183.94 C2 0738 246 CHJL-30. 11/6/01 2034.75 91 OK 0930 11/5/01 2057-90 95 OK 12 11/6/01 0840 241 LJEL-30 90 4508.51 NK 11/5/01 1055 4531.53 90 OK KZ 11/6/01 0957 242 PMSL-30 2846.95 91 11/5/61 OK. 1261 66 6K 1119 2870.26 243 MESL-30 11/6/61 Fa 2882.52 90 OK 11/5/01 1300 93 2905.83 OK 62 4/6/01 1217 244 | SESL-30 OK 91 0641 12468.84 11/6/01 90 ot 0618 12492.47 245 SALL-31 MZ 11/7/01 89 OK 3184.15 0751 11/6/01 92 CK 3207.63 0719 C2 11/7/01 246 CHJL-31 91 OK 2058.05 11/6/01 0848 91 OK L2 2081.84 11/7/01 6836 247 LJEL-31 89 6K 4531.63 1002 11/6/01 KZ OK 4555.31 88 11/7/01 0944 248 PMSL-31 91 OK 11/6/01 1135 2870.53 85 OK F2 1100 2893.94 249 MESL-31 11/7/01 OK 89 2905.97 1226 11/6/4 80 OK 2909.43 Ga 1153 11/7/01 250 SESL-31 OK 91 0626 12492.59 11/7/01 OK 12516.34 Ma 11/8/01 0611 5ALL - 32 251 OK 91 0727 3207.75 11/7/01

252 CHUL-32

MFM Used # 5346

C2

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11/8/01

0058

2731,27

Project: Chloropicrin Ambient Air Monitoring in Monterey & Santa Cruz Counties

Project # P-01-004 On Flow: 90 +2ccm Off Flow: 90ccm +10%

								Flow: 90ccm +10%	·	
Log	Sample	Sampler	Date	Time	Counter	Flow	Leak	Comments	Weather	
#	Name	ID	On -	On	On	On	On		K,P,C,F&R	On On
444	A Michigan William	Number	Off	Off	Off	Off	Off	第一年第二年第十年	On Off	
100		· · · · · · · · · · · · · · · · · · ·	11/7/01	0844	2081.98	91	OK	·		01/
253	LJEL-32	12	11/8/01	0746	2105.01	90	OK		KK	Cap
			11/7/01	0952	4555,45	91	01<		K	200
254	PMSL-32	Ka	11/8/01		4578.47	93	OK		1/2	CHORD
			11/7/01	1107	2894.06	90	6K	·	KE	Carl
255	MESL-32	FZ	11/8/01	1003	2917.07	94	OK		>K	Z CAF
			11/7/01	1201	2929,56	90	OK		K	apr
256	SESL -32	G2	11/8/01	1102	2952.57	92	OK		ZK	ACAL.
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NACA II	and# #244		Page 4	Of 15	Macth	er codec: K	Close	I	2000	\leftarrow
MLM O	sed # <u>5346</u>		Page _/5	_ OI <u>_3</u>	vveatne	ei coues. N	- Clear	$r_1, r_2 = r_3$ Cloudy, $r_1 = r_2 = r_3 \approx r_3$	g, & K = Ra	ıın (any)

APPENDIX V

Field Data Sheets for MITC and 1,3-Dichloropropene

Project: MITC Ambient Air Monitoring in Monterey & Santa Cruz Counties

Project #: P-01-004 On Flow: 2.50 +0.02lpm Off Flow: 2.50lpm +10% Time Flow Sampler Date Counter Leak Comments Weather Initials Log Sample ID On K.P.C.F&R On On On On Name Off Off Off Off Off Off Philips Number 1645 1748.42 AX250 9/8/01 OK 1-TIA2 100 M3 9/9/01 2.49 0646 11772.46 OK 9/8/01 0.653 1748,55 1.50 OK ON2 SALT-IFS **M**3 9/9/01 2.47 0658 11772.63 0 K 0728 2464.49 2.50 0K D3 003 CHWT-1 2488.66 2.54 OK 101 0728 9/8/01 OK 0811 122870 2.50 1-73E7 1400 13 9/9/01 2.53 014 0823 1262.90 9/8/01 0859 3113,56 2.50 OK 1005 PMST-1 K3 9/9/01 0913 3/27.80 2.54 OK Leaked. Cabletic fixed around islet take aleloi 2152.02 1937 2.50 OK E.3 -T23M 1200 9/9/01 0956 2176.34 2.57 OK +1 rotanetes 2185.11 9/8/01 250 DK F/C 1010 1-7232 100 63 2209,49 1033 2.50 OK 9/9/01 0709 _ TRIP BLANK SALT-ITB 800 9/9/01 2.50 0651 11772,52 OK 009 SALT-2 143 9/10/01 11796.26 2.49 0636 OK 9/9/01 0702 2.50 11772.71 OK 2:43 SALT-2 C I3 010 9/10/01 11796.53 2.633 0652 OK 9/9/01 0744 2488.76 2.50 OK CHUT-2 D3 G/16/01 0752 2512:84 00 2.48 011 9/9/01 2488.86 250 0753 OK 012 CHUT-2 C 03 9/10/01 2512.98 2.68 0744 OK 9/9/01 1363,03 0830 2.50 OK C 43 013 LJET-2 0833 387,05 9/16/01 UK 2.50 9/9/01 0837 1363114 2,50 OK LTET-2C T3 014 9/10/01 0840 2.52 OK 9/9/61 0919 2.50 OK PMST-2 K3 09.34 3162.13 2.54 OK 9/9/01 0926 2.50 OK Prist-2 C 133 7/60/01 3162,22 04 6939 2.465 9/9/01 2.50 1002 1.176.43 8 K a MEST-2 63 4/10/01 1008 2200.54 245 DIL 919/01 1002 2176.53 250 014

2.50

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of 15

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2200.68

9/10/01

Project: MITC Ambient Air Monitoring in Monterey & Santa Cruz Counties

Project #: P-01-004 On Flow: 2.50 ±0.02lpm Off Flow: 2.50lpm +10% Date Time Counter Flow Leak Comments Weather Initials Sample Sampler Log K,P,C,F&R On ID On On On On On Name Off Off Off Off Off Number 2209.61 9/9/01 1039 2.50 GK 63 019 SEST-Z 1053 2,53 9lidas 1233.84 01 9/9/01 1045 2209.70 2.50 OK A3 2233.92 9/12/01 2,22 620 565-2C 1058 01 1 MSR 9/3/01 Trip Spike 021 SEST-175 9/10/01 0644 11796.39 2.50 OK 022 SALT-3 M3 9/16/01 0637 11820.29 2.40 OK 9/10/01 0746 2512.79 2.50 OK CHUT-3 C3 9/11/01 2536.48 2.94 523 0727 OK 9/16/61 0836 1387.12 2,50 OK 024 LIET-3 15 9/11/01 0821 1410.87 2.53 01 3162.16 RC 9/10/01 0936 OK 2,50 1 025 PMST-3 K3 9/11/01 0929 3186.05 2.51 OK 9/10/01 2200.64 OX 1014 2.50 AC **B**3 2224.59 2.35 026 MEST-3 9/11/01 1012 OK 1056 9/16/01 2233.87 2,50 OX 63 027 ISEST-3 9/11/01 1056 22 57,86 2.56 01 9/11/01 0645 11820.41 2,50 OK 028 MB TRACK RAIN 0643 11844.38 2.44 9/12/01 OK 9/11/01 0734 2536.61 2.50 DK CHUT-4 029 <u>C</u>3 2560,45 2.86 6729 OK HEAVY OVERCAST ON CLASTOL RANGE 9/12/61 2.50 9/11/01 0829 1411.00 OK LJKT-4 L3 0-36 2.39 9/12/01 1434.93 OK 0815 3186.08 0930 2.50 015 9/11/01 PMST-4 K3 3209-78 9/12/01 0912 2.56 OK 031 1020 2224.74 2.50 9/11/01 OK MEST-4 E 3 2248.23 0950 032 9/12/01 2.28 OK Ac 9/11/01 1105 2258,04 2.51 015 G-3 SEST-4 2281.46 2.47 9/12/01 015 1031 A 500 11844.61 2.50 人人 9/17/01 0647 M3 034 SALT-5 9/15/01 11868.27 2.49 OK 0625 2.50 0728 2560.82 OK 9/17/01 035 CHUT-5 0710 9/18/01 2584.56 2.00 OK 0812 1435.25 9/17/01 2,50 OK LJET-5 036 **L3** 014 PA/L OVERTIME - VEHC. PRIBLEM 9/18/11 95CU.69 14 (1,2 Weather codes: K = Clear, P = Partly Cloudy, C = ≥ 75% Cloudy, F = Fog. & R = Rain (anv) MFM Used # 5286 of 15

Project: MITC Ambient Air Monitoring in Monterey & Santa Cruz Counties

Project #: P-01-004 On Flow: 2.50 +0.02 pm Off Flow: 2.50 pm +10%

				ect # : P-0	1-004 On Flow:	2.50 <u>+</u> 0.02	pm O	ff Flow: 2.50lpm <u>+</u> 10%		
Log	Sample	Sampler	Date	Time	Counter	Flow	Leak	Comments		Initials
#	Name	ID	On	On	On	On	On		K,P,C,F&R	On Off
1	The market desire	Number	Off	Off	Off	Off	Off		On Off	We di
			10/17/9	0900	3329,56	2.50	OK			JW/
037	PMST-5	K3	9/18/01	1103	3355.65	2.52	OK		OC C	AC
			9/17/01	0925	2248.52	2.50	OK		OC/	700
038	MOST-S	E3	9/18/01	1137	2274.74	2.49	OK		c	AC
			9/17/01	0947	2281.80	2.50	ok		OC_	สนา
039	SEST-5	G3	9518101	1210	2308,23	2.51	OK		C	AC
4 1)			_				1		oc_	3W/
040	SALT-STB		9/12(0)	_		_	_	TRIP BLANK	-	
	CA /	447	9/18/01	06 31	11868.38	2.50	OK		F	ACYW
941	SALT-6	M3	9/19/01	0726	11893.28	2.48	OK		F	JM
6113	CA 1 C	13	10/81/6	0638	11868.38	2.50	OK		6	Aû/
040	SALT-GC	13	9/19/01	0733	11893.38	2.48	OK.		, E	AC SW
Δ// 2	CHUT-6	C3	9[18]01	6718	2584.69	2,50	0 E			A = /
043	CH01-6	<u> </u>	9/19/01	0801	2609.42	2.48	0大		F	7 7 W
\U.	CHUT-6C	D3	9/18/01	0825	2584.81	2.50	OE		FF	AL/
077	CH01-6C		9/19/01	0808	2609.45	2.53	0 E	TRUCK PROBLEM	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	1/3W
045	LJET-6	L3	9/18/01	1025	1461,49	2,50	٥٤ ـ	· ·	c/c	AL
			9/19/01	0931	1484.57	2,46	0E		F	720
046	LJET-60	53	9/18/01	1029	1461.50	2,50	OK		CF	AK JU
			9/19/01	1111	1484.65 3355.78	2.49	or or		<u></u>	() (
047	PMST-6	K3	9/19/01	1016	3378·83	3.50	OFC		CC	DE 3W
			9/18/01	1113	3355-83	2,50	OŁ			
048	PMST-60	B3	9/19/01	1022	3378.92	2,45	OL		2/5	AC 5W
			9/18/01	1143	2274. 85	€2.50	OK			
044	MEST-6	E3	9/19(0)	1045	2297.84	2,50	OK	•	<u></u>	Se Jus
			9/18/01	1145	2274.89	2.51	0k		C /	~
050	MEST-6C	F3	9/19/85	1048	2297.89	2.49	0)E		C	AC 5W
-			9/18/01	1219	2308.38	2.50	6Ł		C /	1/
051	SEST-6	G3	9/19/01	1127	2331.47	2.43	0E		PC	AC SW
1		A 2	9/18/01	1225	2308.46	3.52	0と		C /	As /
029	SEST-60	A3	9/14/01		2331, 41	2.52	ok.		PC	A SW
122	C1 "	44.2		0648	11893.46	2.50	OK	•		200/
1033	SALT-7	M 3	9/23/01	0643	11917.37	2.50	OK		/ c	5W
اررس	A 11.17 - 1	A	9/22/01	0731	2609.51	2.50	OK		F	5W/
		C3	9/23/01	0739	2633.65	2.61	0/			15 W
MFM U	sed # <u> ちょらし</u>		Page 3	of <u>15</u>	Weath	er codes: K	C = Clear	, P = Partly Cloudy, C = \geq 75% Cloudy, F = Fc	g, & R = Ra	in (any)

Project: MITC Ambient Air Monitoring in Monterey & Santa Cruz Counties

Project #: P-01-004 On Flow: 2.50 ±0.02lpm Off Flow: 2.50lpm ±10%

Log	Sample	Sampler		Time	Counter	Flow	Leak	Comments	Weather	Initials
#	Name	ID	On	On	On	On	On		K,P,C,F&R	
		Number		Off	Off	Off	Off	The second of th	On Off	
	LJET-7	, 5	9/22/01	0820	1484.73	2,50	OK		F	7W/
055	L>E 1 - 1	L3	9/23/01	0840	1508.66	2.48	OK	FOUND A. C. OFF (RUNTIME = 23.75)	/ c	3W
056	PMST-7	K3	9/22/01	0922	3449.52	2.50	OK		PCC	5W/
000		N. J.	9/23/01	1030	3474.11	2.55	OK			SW
057	MEST-7	E3	9/22/01 9/23/01	1023	2381.93	2,53	0人		PC	JW 2
			9/22/01	1103	2331,62	2.50	OK			7W/
058	SEST-7	G3	9/23/01	1105	2355.65	2.53	改大		PC	/5 W
260	SALT-8	7	9/23/01	0649	11917. 49	2.50	OK		2/	301
054	SAL 1-0	M3	9/24/01	0647	11941. 45	2.40	ok		<u> </u>	15W
060	CHUT-8	C3	9/23/01	0749	2633.82	2.50	OK		CC	5W/
000		62	9/24/01		2657.73	2.50	OK			/5W
061	LJET-8	L3	9/23/01	0846	1508.76 1532.73	2.50	0大	*	cc	JWJW
			9/23/01	0939	3414,20	2.50	OK		C /	JW/
062	PMST-8	K3	9/24/01	0947	3498.34	2.50	OK		/ <	5 W
2/2	MEST-8	~~	9/23/01	1029	2322, 03	2.50	OK	-	PC	5W/
063	MC31-0	E3	9/24/01	1031	2346.06	2.47	OK			-/5W
064	SEST-8	G 3	9/23/01	1112	2355.76	2.50	OK	BATTA	PC PC	JW
1007		47	9/24/01	1115	2379.81	2.49	OK	1917%		
065	SALT-9	m3	9/24/01	0653	11945-65	2.46	OK	RAINED GUELNIGHT	5/0	5W/5W
			9/24/01	0752	2657.86	2.50	OF			JW
066	CHUT-9	C3		0753	2181.90	2.48	OK	"	F	JU
267	: TET-0	1		0852	1532.85	2,50	OK		c /	كالآ
067	LJET-9	L3		0911	1557.19	2.49	OK	(1	K	100
068	PMST-9		9/24/01	0954	3498.45	2,50	OK	G Commence of the Commence of		3m
~~0	11/12/27	K3	9/25/61	1003	3522.62	2.51	ΦK		K	1000
069	MEST-9	E3	9/24/01	1038	2344.18	2.49	OK	4	CK	JW
				1122	8379.93	2.50	OK			<u>/01/2</u>
070	SEST-9	G3	9/25/01	1/29	2404.07	2.56	OK		1	1000
			9/25/01	0709	11965,83	2.50	OK			0)×13
071	SALT-19		9/26/01	0641	11989.35	2.50	OK			
072	SALT-19 FS	I3		5714	11965.93	2.50	OK		c /	Com
072	sed # 5386	1.5	9/26/0/ Page 4	0649		2.46	OK	P = Partly Cloudy C = > 75% Cloudy F = For	_ ~ \	/ 5-

MFM Used#<u>5286</u>

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Project: MITC Ambient Air Monitoring in Monterey & Santa Cruz Counties
Project # P-01-004 On Flow: 2.50 +0.02lpm Off Flow: 2.50lpm +10%

		0		ct#:P-01	-004 On Flow: 2 Counter	Flow	Leak	Comments	Weather	Initials
Log	Sample	Sampler		Time	On	On	On	Colorado do Californio de Colorado de Colo	K,P,C,F&R	
#	Name	ID	On	On			Off		On	UII
- 9		Number	Off	Off	Off	Off	UII	。 「中国的社会」 「中国的社会 「中国的 「中国的社会 「中国的社会 「中国的社会 「中国的社会 「中国的社会 「中国的 「中国 「中国的 「中国的 「中国 「中国的 「中国 「中国的 「中国 「中国 「 「 「 「 「 「 「 「 「	Off	
27.2	_		9/25/01	06/2				50.0 00.	K/	JW
073	SALT-10TS		_					TRIP SPIRE	K	
A7/1			9/25/01	0612				TRIP BLANK	^	AND I
074	SALT-10 TB							16 BLANK		
075			9/25/01	0759	3692.60	2.50	οK		EK	8 TU
075	CHUT-10	<u>с</u> 3	9/26/01	0747	2705.78	3.52	1/			
076	1 mgm	L3		0917	1580.65	2.51 2.49	OK		KK	OF SW
0 (8	LJET-10	F2	9/26/01	1011		2.40	OK			
077	PMST-10	кз	9/25/01	0946	3546.32	a. 45	OK		K	W. W.
0.,	VM51-10	<u> </u>	9/25/01	1102	2376.35	2.50	oK			
078	MEST-10	€3	9/24/01	1026	2393.73	2.50	OK		KK	OF JN
0.0	W(23) 10		9/25/01		2404-20	2.50	OK		1.	CYTH
079	SEST-10	G3	9/26/01	1120	2427.89	2.50	OK		K	JW
	JE 37 10	<u> </u>	9/26/61	0659	11989.65	2.50	OK		KOC	DW/
080	5ALT-11	M 3	9/27/01	0638	12013.32	2.48	OK		PC	1010
	01/27	7-1-0	9/26/01	0704	11989.74	2.50	ok		K	JU/
081	SALT-11C	<i>±3</i>	9/27/01	0645	12013.45	246	0 K		PC	CAP
			9/26/01	0801	2706.00	2.50	.ok			5ω/
087	CHUTT-11	03	9/27/01	6734	2729.58	2.34	ok		P	100
			9/26/01	0758	2705.96	2.50	OK		K	TW
083	CHUT-11C	C3	9/47/01	0727	2729.47	2.19	OK			Capo
- 0.1			9/26/61	0845	1580.74	2.50	OK	·	K F	2 W)
084	LJET-11	L3	9/27/01	0813	1580.81	2.51	OK			TW
اسمدا			9/21/01	0849		2.49	OK	·	K (=	73/09/
082	LJET-11C	J3	9/27/01	0818	1604.32	2.50	OK			5W/
			9/26/61	0952	3546,42	2.50	OK		K OC	100 p
086	AM5T-11	K3	9/27/01	0902	3569.61	2.50	0 K			1W/
687	.)	פ מ	9/26/01	0956	3546,49 3 5 69.70	2.44	OK		5 oc	100
087	PMST-11C	B3.	9/27/61		2393.93	2.50	OK			W
088	00 ECT 11	E3	9/26/01	1038	24/7.07	2.46	OK		₹ oc	62-
000	MEST-11	23	9/26/61	1046	2394.06	2.50	OK	- 2.42 99	k	-JW
089	MEST-11C	F3	9/27/01	0953	2417.20	2.50		** '	700	104
	MES/-//C		9/26/01	1124	a427.96	2.50	OK		5	30
090	SEST - 11	G3	9/29/01	1032	2451.12	2.52	oK			1090
MEM	Jsed # <u>538</u> 6		Page _5			er codes: k		r, P = Partly Cloudy, C = ≥ 75% Cloudy, F = Fe	og, & R = Ra	in (any)
1411 IAI C			-5-							

Project: MITC Ambient Air Monitoring in Monterey & Santa Cruz Counties

Log	Sample	Sampler		Time	Counter	2.50 ±0.02 Flow	Leak	ff Flow: 2.50lpm ±10% Comments	Mostha	
#	Name	ID	On	On	On	On	On	Comments	Weather	On
		Number		Off	Off	Off	Off		K,P,C,F&R	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			9/26/61	1128	2428.03	2.50	OK			3W/
091	SEST-11C	43	9/27/6/	1039	2451.23	2.48	GK		5	
			9/27/01	0650	12013.53	2.56	OK		PA	1000
092	5ALT - 12	M3	9/28/01	0657	1237-62	2.47	0人		Pak	Of SW
	1.		9/27/01	0738	2729.64	2.50	OK			09/
093	CHUT- 12	C3	9/28/01	0731	2753.52	2.50	OK		PK	/300
0911			9/27/01	0822	1604.38	2.50	OK		-	and JW
014	LJET-12	13	9/28/01	0810	1628.16	2.50	OK		FK	JW
062	.	14.3	9/27/01	0912	3569.76	2.50	OK		00	
015	AMST-12	K3	9/28/01	0850	3593.38	2.49	OK		K	9/53
09/2	MEST-12	~ 2	9/27/01	0958	2417.28	2.50	OK		ec.	07/34
0 70	ME31-14	€3	9/28/01	0923	2440.68	2.50	οK			
097	SEST-12	63	9/27/01	1043	2451.30	2.50	OK		PL	CASU
	3011/2	-	9/28/01	0949	R414.37	2.49	OK			
098	SALT - 13	AA 3	10/3/01	0725	12039.98	2.50	oK		F	9/00
-,0	SALI - 19	M 3		0727	12062.00	2.40	6 K			Z CAF
099	SALT-13TB		10/4/01	0704				TOID DIANK	0C	cap
	01121 1012		12/2/2/	0817	2753.84	2.50	oic.	TRIP BLANK		 _
100	CHUT-13	C3	10/3/01	0829	3778.04	2.47	OK		Foc	of
				0907	1628.44	2.50	ok			24/2
101	LJET-13	L3	10/4/01	0937	1652-93	2.46	OK		0500	Too
			10/3/01	(901	3/14.58	2.50	6K			
102	MMST-13	K3 [3739.19	2.57	OK		oc oc	1000
			10/3/0/	161	2441-09	2.50	OK			Off
103	MEST-13	E3	10/4/01	1140	2465.74	2.44	OK		K P	1000
			10/3/01	1147	2474.64	2.50	OK		"	me
104	SEST- 13	G3		1238	2499.50	2.46	OK		K A	Cop
125	-1 - 4		7 7	0735	12062.14	2.50	6K		00	NP/
/0.5	5ALT-14			0640	12085.72	2.45	014		OC	1000
106	- L		10/4/01		12662.24	2.50	014		64	19
100	SALT-14C			0658	12085.52	2.46	OK		المحر الم	109
		, ,	·		2778.26	2.49	OK		ر ٥	240
, , ,	CHUT-14				2801.38	2.51	OK		66	yapo
108	CHUT-14C	03		0850	2778.38	2.51	OK	*-	ر ر	nd.
ACMALI	CH 01 -17 -	00			2801,53	2.70	0K		700	Xan
ALIM O	sed # <u>5284</u>		Page _ 6	of <u>15</u>	vveatn	er codes: K	= Clear	, P = Partly Cloudy, C = \geq 75% Cloudy, F = Fo	g, & R = Rai	n (any)

00105

Project: MITC Ambient Air Monitoring in Monterey & Santa Cruz Counties

Project #: P-01-004 On Flow: 2.50 ±0.02ipm Off Flow: 2.50lpm +10% Flow Leak Comments Weather Initials Sampler Date Time Counter Sample Log K.P.C.F&R On Name ID On On On On On Off Off Off Off Off Number - The Administration of the State 1653.02 10/4/01 0942 2.50 ٥K 109 LJET-14 L3 OK 1676 - 29 16/5/01 0859 2.50 10/4/01 0946 1653.09 2.50 OK 110 LJET-14C J3 1676.47 0.50 OK 10/5/01 0910 1045 3739.32 2.51 015 111 PMST-14 2.52 10/5/01 1007 3762.69 015 3739.42 10/4/01 2.50 0/5 1051 B3 112 PMST-14C 10/5/01 3762.85 2.51 OK 1017 2465.88 1149 OK 10/4/01 2.51 E3 113 MEST-14 2489-35 2.66 OK 10/5/01 1117 250 2466-01 0K 1156 114 MEST-14c F3 2489.62 10/5/01 1133 2.72 OK OK 2.49 2499.61 1245 115 SEST-14 G 3 2.50 OK 1234 2523.42 2.50 OK 2499.71 1251 A3 2.48 116 SEST - 14C OK 10/5/01 1244 2503.60 10/5/01 6703 12085.61 2.51 OK 117 SALT -15 6K 0746 12/09.32 2.43 2301.66 10/5/01 OK 0806 2.51 OK 118 CHUT-15 10/6/01 0749 2825.37 2.46 1676.58 OK 10/5/01 2.50 0916 13 1700.01 2.42 OK 119 LJET-15 10/4/01 0841 1024 3762.96 2.50 6K 120 PMST-15 K3 DK 3786.34 OC 2.55 10/6/61 00 46 2489.78 2.5 1 0 K 1142 E3 121 MEST-15 1046 2512.85 2.47 OK 1257 OK 2523.31 250 63 122 SEST-15 2546,34 2.48 OK 10/6/01 1155 2.50 OK 12/19-43 0652 3/123 JALT-16 SLIGHT DRIZZLE 12/33.29 2.61 OK 0644 2.50 6K 0755 2825.46 124 CAUT-16 c 3 2849.19 2.54 OK 0739 10/7/01 0844 1700.15 OK 7.50 125 LJET-16 L3 0830 OK 1723.80 2.50 0972 2786.44 OK 2.50 K3 126 PMST-16 13810.13 2.47 0934 10/7/01

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Project: MITC Ambient Air Monitoring in Monterey & Santa Cruz Counties

Project # : P-01-004 On Flow: 2.50 +0.02lpm Off Flow: 2.50lpm +10%

Log	Sample	Sampler		Time	Counter	Flow	Leak	Comments	Weather	Initials
#	Name	ID	On	On	On	On	On	TO NOT THE PROPERTY OF THE PARTY OF THE PART	K,P,C,F&R	
- 15-4-5E	Service and Alberta	Number	Off	Off	Off	Off	Off		On	Factor &
			10/6/01	/054	25-12.97	2.50	OK		053	00/20
127	MEST-16	E3	10/7/01	1022	2536.44	2.52	oK		OC P	ay
			10/6/01	1206	2546.97	2.50	OK			col
128	SEST-16	G3	10/1/01	1130	2570.36	2.48	OK		K	SOP
1-0	SALT-17	1.0	10/11/01	0703	12133.41	2:50	04		KO	AR!
129	>HL1-11	M3	10/12/01	0648	12157.16	2.50	OK			T AR
130	SALT-17 TS	_	10/12/01	0650				TRIP SPIKE	7/0	A
-							_			
131	SALT-17TB		10/12/01	0652		_	_	TRIP BLANK	1	A
			Ioleiloi	0709	1213351	2.50	OK		KO	Ae/
/32	SALT-17FS	T 3	10/12/61	0707	12157,47	2.50	OK) P	A
	011.7		iolilloi	0892	2849.25	2.50	OK	PAULAL FRONTAGE ROAD TO HENY 101 YETHLE TO WEST OF SCHOOL	K	Ae/
132	CHUT-17	<u>c3</u>	10/12/01	0815	2873.42	2.44	OK	10 soes, or school		/Ac
124	1.3KT-17	L3	10/11/01	0905	1748.66	2.50	OK		PC	Ae/
/47	1,312111		10/11/01	1000	3906,60	2.50	OK		K	/Ae
135	PMST-17	K3	10/12/01	1026	3931.02	2.41	OK		05 K	AC/AC
			10/11/61	1053	2536.47	2.50	OK			AR
136	MEST-17	£3	10/12/01	1109	2560.77	2.49	OK		K	HA.
			10/11/01	1126	2570.49	2.50	ok.		PC	AR
137	SEST-17	63	10/12/01	1151	2594.91	2.46	ok"	TRACTOR DISCING FIGUR ACROSS STREET	15	ZAC
	CAITIT		10/12/01	0718	12157.63	2,50	OK.		P	AL/
/38	SALT-18	M3	10/13/01	0642	12181.06	2.47	OK		<u>/ </u>	/Ac
ا ءد	SALT-18C	72	10/12/01	0725	12157. 77	2.50	OK			AC/
/39	SHLI-18C	<i>I</i> 3	10/13/01	0659	12181.34	2.50		ROAD PAVING NEARBY		1 HC
140	CHUT-18	C3	10/13/01	0803	2873.58	2.50	OK	KOW I HANNE WIGHT 127	PK	AR
(,,,,,,	2		10/12/01	0833	2873.7/	2.50		ROAD PAULE WEAR BY		<u> </u>
141	CHUT-18C	07	10/13/61	0814	2897-39	2.52	OK.	Parket Control of the	K	AR A
			10/12/01	093/	1748.36	2.50	OIC			Ac/
142	LJET-18	73	10/13/01	0912	1771.34	2.51		AREA STIKLLS EMEKRY	<u> </u>	Be
		-,	10/12/01	0936	1748.44	2.50	OK		K	ge/
143	LJET-18C	53	10/13/01	0923	177/.52	2.54		AREA FRELLS SMOKEY	2 K	/ AR
أرير	PMST-18		10/12/01	1631	3931.11	2.50	OK		K	AR
	sed # 5086	<u> </u>	<i>i0[13]61</i> Page <i>8</i>	1019 of 15	3954.91	2.46	oK	P = Partly Cloudy, C = > 75% Cloudy, F = Fo	1 K	/ AL

Project: MITC Ambient Air Monitoring in Monterey & Santa Cruz Counties
Project #: P-01-004 On Flow: 2.50 +0.02lpm Off Flow: 2.50lpm +10%

Log	Sample	Sampler		Time	Counter	Flow	Leak	Comments	Weather	Initials
#	Name	ID	On	On	On	On	On	Secretary of the small collection constructive dominates to the first transfer.	K,P,C,F&R	
	Carlo Carlon La Carlon	Number		Off	Off	Off	Off		On Off	
			10/12/01	1036	3931.19	2.50	OK		K	AC
145	PMST-18C	Bz	10/12/01	1080	3955.09	2.50	OK		, F	Re
	T		10/12/01	1/17	2560.91	2.50	OK		K.	AR
146	MESM-18	É3	15/13/01	1118	2564.91	2.50	OK		XX	A
	MESA-18C	20	10/12/01	1/21	2560.97	2.50	OK		K	Ac/
147	MESM-180	F3	10/13/01	1128	2585.09	2.50	OK		K	Ac
1110	Carrie IC	63	10/12/01	1211	02595.24	2.50	OK		K	Ae
148	SES91-18	8-72	10/13/01	1206	2619-17	2.64	8K	TRACTOR DISCING KIELD ACROSS STREET	K	/AR
149	SESP1-18C	A3	10/12/01	12/7	2595.34	2.50	OK	+1 12 11 1 ₁ 12	15/10	AS
'77	3123/1 182		10/13/01	1218	26/9.36	2.30	OC		K	A
150	SALT-19	M3	10/14/01	0701	12181. 40	2.50	OK	-	KK	4
	7,421		10/13/01	0818	2897.47	2.50	OK			ZAC.
151	CHUT - 19	c3	10/14/01	0758	2921:13	2.49	OK		Kw	AR
			10/13/61	0926	1771.57	2.50	GIL		1	/ AR
152	LJET-19	L3	10/14/01	0853	1795.03	2.48	014		5 W	AL AL
			10/13/01	1032	3955.13	2.50	ok		K	
153	PMST-19	k3	10/14/01	0946	3978.36	2.48	OK		X	AS AR
,			10/13/01	1131	2585.13	2.50	OK		K	As/
154	MEST-19	E3	10/14/01	1049	2608.41	2.49	OK		// K	TA
		00	10/13/01	1220	2619.40	2.50	OK	TRACTOR DISCING FIREN ARROSS STREET	14	AC/
155	SEST-19	G-3	10/14/01	1133	2642.62	2,53	OK		K	Ae
	<u></u>	"40	10/14/01	0704	12205.42	2,50	OK		k /	AR
156	SALT-20	M3	10/15/01	0610	12228.57	2,49	e :<		K	/Ac
107	C447-20	C3	10/14/01	0800	2921.17	2.50	OK		W	AR O
157	CH47-18	23	10/15/07	0700	2744.16	2.45	OK			Z 196
158	LJET-20	L3	10/14/01	0855	1718.06	2.50	OK		W	Al Se
	2321 20		10/14/01	0949	2978.41	2.50	OK			_ // _
159	PMST-20	1,3	10/15/01	0849	4001.41	2.48	OK		K	AS,
'' 	1.1(3. \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	_'_>_	10/14/01	1051	2608.47	2.50	OK		/ K	/AR
160	MEST-20	E3	10/15/01	0951	2631.47	2.53	OK		5	Al AR
			10/19/01	1135	2642.65	2.50		FRACTOR DISCING FIRED ACRES STREET		
161	5657-20	63	10/15/01	1035	2665.65	2.46	015	1 10 -10 1/2 13-12- FIRED THE ENCLES	is 1x	AR/AR
			10/19/01	0642	12228.66	2.50	OK			W
162	SALT-21	W3	10/20/01	0626	12252.39	2.50	OK		FF	M
	93.57 # hee		Page 9					P = Partly Cloudy C = > 75% Cloudy E = E		W/1/c

100108

MFM Used # 5286

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Project: MITC Ambient Air Monitoring in Monterey & Santa Cruz Counties

Project # : P-01-004 On Flow: 2.50 +0.02 pm Off Flow: 2.50 pm +10%

1	I Communication	I Commit	Proje					ff Flow: 2.50lpm <u>+</u> 10%		
Log	Sample	Sampler	1	Time	Counter	Flow	Leak	Comments		Initials
#	Name	ID	On	On	On	On	On		K,P,C,F&R	On Off
37.74	die zewarekszer	Number	Off	Off	Off	Off	Off		On Off	13 M (14)
		+ -	10/19/01	0651	12228.81	2,50	OK		F	BL
163	SALT-21 C	13	10/20/01	0636	12252.56	2.44	OK		F	AKK
1			10/19/01	0740	2944.29	2.50	OK	Full of water Deied out system.	F	JRE IN
164	CHUT-21	£3	10/20/01	0731	2968.14	1.60*	OK	Pried + sort and	F	JA.
		_	10/19/01	1747	2944,40	2.50	OK	Water Direct scoled	F	I A LO
65	CHRT-21C	0.3	10/20/01	0742	2968.32	2.37	OK) AR
100			10/19/01	0835	1818.16	2.50	0 K		P	JRC
166	LJET-11	L3	10/20/01	0842	1842.39	2.40	OK		17	TRR
	170-01		10/19/01	0842	1818.27	2.50	OK		0	186
	LJET-210	13	10/20/01	0904	1842.65	2.51	0 %		7	JAR
	PM PCC	1. 2		0928	4098.03	2.50	OK		c /	JRK
	SE ST-21	<u>k</u> 3	10/20/01		4122,42	2.50	OX		/ P	ARR
	PM SEST-21C	B3		0935	4098.16	2.50	OK			IRC/
1001	3E3 1-210	0.3	16/20/01	1002	4122.65	240	9.4		7	/ IR
170	MEST-21	F3	10/19/01		2631.58	2.50	0 🛌		c /	(DL)
- 10		17	10/20/04		2656.15	2.49	OK		P	JAR
171	MEST-21C	E3	10/20/01	1617	2631.70	2.50	OK		c p	KR OD
1/1	117,000	-	10/19/01	1052	2656.32	2,43	OK			IRR
172	SEST-21	63	10/20/01	1141	2690,59	2.50	0K	•	امرا	IRR
1,~	3 (3 (00	10/19/01	1100	2665.91	2.49	OK			HR
173	SEST-210	A3	10/20/01	1121	2690.75	2.50 £.52	OK		c ,	IRB CO
		-^-	10/20/01	0630	12252,47	2.50	OK			ZIRK.
174	SALT-22	M3	10/29/01	0622	12276,32	2.41	02		FC	W R
			10/20/01	0804	2968,69			Sampler onside. when?		
175 1	CHICT-22	C3	111/21/01	0742	2992,32	1.40 *	0 K	The state of the s		SP IRR
				0859	1842.56	2.50	OK			
176	LJET-22	L3		0854	1866.47	2.47	OX		\	100 ARR
			,	0001	4122.57	2.50	OX			W XX
177	PMST-22			0952	4146,44	2.48	OK	<u>.</u>	C 1	"AR
	· · · · · · · · · · · · · · · · · · ·		+0/20/01	1109	2656.57	2.50	OK			AR
178	MEST-22	F3	10/21/07	1043	2680.44	2.49	OK		ر ا	XK
	TCT 00	n L		1159	2690.89	2,50	OK			N. C.
79	SEST-22	A3	10/21/01	1133	271445		OK		ا ح 🖊	TRK
10.15	Chi = -	Nho L	10/21/01	0632	12276.49	2.50	QK	,		R
	-117-7-1	M3	10/22/01	0600	12299.96	2.48	61K			
MFM Us	sed # <u>5286</u>		Page 10		Weath	er codes: K	= Clear,	P = Partly Cloudy, C = ≥ 75% Cloudy, F = Foo	1. & R = Rair	a (anv)
			4		_				,	(~,

Project: MITC Ambient Air Monitoring in Monterey & Santa Cruz Counties

Project # : P-01-004 On Flow: 2.50 +0.02 pm Off Flow: 2.50 pm +10%

								ff Flow: 2.50lpm <u>+10%</u>	1 100 40	1
Log	Sample	Sampler		Time	Counter	Flow	Leak	Comments		Initials
#	Name	ID	On	On	On	On	On		K,P,C,F&R	Off
100	10 10 months 2000	Number	Off	Off	Off	Öff	Off		Off	A SEC.
,			10/21/01	0755	2992.53	2.50	OK	Sitieored toget rainchield	c /	JE AS
181	CHUT-23	C3	10/22/01	0)22	3016.00	2.46	OK			J.C
			0/21/01	0902	1866.61	2,50	OK		· /	JRR 0.
182	LJET-23	13	10/22/01	0829	1890,06	2.48	OK		/ c	RR
4			10/21/01	1001	4146.58	2.50	OK		C/	Ve.
183	PMST-23	K3	10/22/05	0926	4170.01	2.58	OK			JER.
		_	10/21/01	1053	2680.30	2.50	04		c /	100 301
184	MEST-23	F3	10/22/01	1012	\$2703.62	2.47	OK		c	
		n -	10/21/01	1142	2714.61	2.50	OK		C /	ARKIN
185	SEST-23	A3	10/22/01	1058	2737.88	2.38	OK		K	/ 1K
124	Chitaban		10/22/01	0608				7 - 101 1		JAR.
186	SALT-24TB		 ,					Trip Blank		_
, (0 %	30 4-	16/22/01	0616	12300-21	2.50	OK	·	c /	JRAIN
181	SALT-24	M3	10/23/01		12324,41	2.44	OK		F	/ LKK
100 l	CHAIR ON		10/22/01	6131	3016,13	2.50	OK	·	د ر	MRS
188	CHUT-24	C3	10/23/01	0719	3039.92	2.43	01		K	
100	LJET-24	, ,	10/22/01	0839	1890.22	2.50	OK		CF	MERCO
19-1	LUEIT	L3	10/23/01	0805	1913.66	2.43	OK			JRR.
iaa	Ouse and	K3	10/22/01	093 <i>5</i>	4170.15	2.50	OK		CF	KK
190	PMST-24		10/23/01	0848	4193.37	2.49	01			
100	1055	E2	10/22/91	1021	2703.72	2,50	OK		PP	1PR 100
in	MEST-24	F3	10/23/01	0924	2726.83	2.48	ØK-			TRE
100	222	\ \ \ \ \	10/22/01	1108	2738.04	2.50	0)		K	JEZ NA D
112	SEST-24	A3	10/23/01	1000	2761.05	2,38	OK		K	Tee
193	SALT-25	мз	10/27/01	6721	12324.79	2.45	0大		SP	200
112	SAL 1-25	M3	10/28/01	0708	12348.57		0尺			/ 304
194	SALT-25C	13	10/27/01	07/6	12348.70	2.50	OK	 	SP	734
- '	2451 a(2 €	# 3	10/27/01	0813	3040.29	2.50	OK			
195	CHUT-25	С3	10/28/01	08/2	3064.28	2.46	01		CP	227
• • •	27,01 03			0823	3040,45	2.50	0K			233
196	CHUT-25C	Da	10/28/01	0825	3064. 50	2,38			P	200
	CHUI AUC	-2	10/27/01	0903	1913.87	A.50	OK	, , , , , , , , , , , , , , , , , , , ,		5W/
197	LJET-25	L3		0907	1937.93	2.38	OR		PP	3 JW
	75 75	س-	10/27/01	0910	1913.99	2.50	OK			
198	LJET-25C	33	10/28/01	0919	1938, 13	a. 51	OK		r/P	7W/
	sed # <u>5286</u>		Page 1\					, P = Partly Cloudy, C = \geq 75% Cloudy, F = Fo	7 & P = Pa	
VII IVI U	SCU#		- aye _ 11	. 01	vvcatii	ci coues. N	- Oleai	$\frac{1}{2}$ $\frac{1}$	y, ∝ n - na	mi(dily)

Project: MITC Ambient Air Monitoring in Monterey & Santa Cruz Counties

Project #: P-01-004 On Flow: 2.50 ±0.02lpm Off Flow: 2.50lpm ±10%

Log	•	Sampler	Date	Time	Counter	Flow	Leak	Comments	Weather	
#	Name	ID	On	On	On	On	On		K,P,C,F&R	On
100	i i i i i i i i i i i i i i i i i i i	Number	Off	Off	Off	Off	Off		On	- 10 m
			10/27/01	1001	4290.59	2.50	OK		P	JW/
199	PMST-25	K3	10/28/01	1013	4314.79	2.38	OK		8	OW
			10/27/01	1009	4290.72	a.50	OK		7	JW/
200	PMST-25C	ВЭ	10/28/01	1026	4315.01	2.55	OK		P	JW
			10/27/01	1043	2727.09	2.50	OK		P	5W/
201	MEST-25	FЗ	10[28/41	1103	2751.43	2.33	OK			JW.
			10/27/01	1049	2727,20	2.50	OK		P	3W/
ಎಂಎ	MEST-25C	€3	10/28/01	1116	2751664	2.42	OK			/34
			10/27/01	1/31	2761.29	2.50	OK		P /	5W/
203	SEST- 25	G3	10/28/01	1149	2785.59	2.49	OK		/ -	<u>/301</u>
			10/27/01	1141	2761.45	2.50	oK.		PP	5W/
204	SEST- 25 C	A3	10/28/01	1201	2785.79	2.47	OK	, , , , , , , , , , , , , , , , , , , ,		154
ا شهرد ا		`						7- 2	c/	-/
205	SALT-26 TB		10/25/01					TRIP BLANK	<u> </u>	150
206	64 - 36 TS		tal and a					Tour cour	c/.	-J5W
~ OB	SALT-26TS		10/28/01	0726	12348.87	2.50		TRIP SPIKE		
207	SALT-26 FS	I3	10/29/01	07/5	12312.69	2,40	OK OK	FIELD SPIKE	PC	2W
200	JALI ABIJ		10/28/01	0731	12348.95	2.50	OK	7.000 -P RE		5W/
208	SALT-26	m3	10/29/01	0724	12372.84	2.47	OK		PC	200
77.2	SACI AC		10/28/01	0818	3064.38	2.50	OK		P	777
209	CHUT - 26	c3	10 29/01	0822	3088.44	2.54	oK		C	שני
				0913	1938.03	2.50	OK			5W/
210	LJET-26	L3	10/29/01	0923	1962,21	2.53	OK		- c	5W
				1019	4314.90	2,50	OK		P	3W/
211	PMST-26	K3	10/29/01	1030	4339.07	2.52	OK		<u></u>	JW
			10/28/01	1109	2751.52	2,50	OK		P	501
313	MEST-26	F3	10/28/01	1116	2775.64	2.50	OK		<u></u>	JW
				1155	2185.68	2.50	OK		P /	JW/
213	SEST-26	G3		1201	2809.79	9.62	OK		_ P	<u>√</u> 5ω
			10/29/01	0731	12372, 95	2.50	OK		c /	3 W
214	SALT-27	M3		0705	19396.51	2.4	OK			/3W
				0830	3088.58	2.50	OK		c/0	36
215	CHUT-27	C3		0800	3112.17	2.48	OK		R	JW
ا ۱٫۰۰		. <u>.</u>	10/29/01	0931	1962.34	2.≤0	OK		~ / I	22/
	LJET-27	۷3	10/30/01 Page 13	0908	1985. 96	2.48	OK	P = Partly Cloudy C = > 75% Cloudy F = Fo	R	JW

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Project: MITC Ambient Air Monitoring in Monterey & Santa Cruz Counties

			Proje		-004 On Flow: 2	.50 +0.02lp	om Of	f Flow: 2.50lpm +10% Comments	Weather	Initials
Log	Sample	Sampler	Date	Time	Counter	Flow	Leak		K,P,C,F&R	
#	Name	ID	On	On	On	On	On			
	Park Bernard Andre	Number	Off	Off	Off	Off	Off		Off	操雌 法
A CONTRACTOR			10/29/01	1035	4339. 17	2.50	05	* Sample filled w) water,	SR	333
217	PM ST-27	к3	10/30/01	1020	4362.92	*	×	Very little flow	<u> </u>	3W/
	1///31	- 12 - 1	10/29/01	1123	2175.75	2,49			CR	
218	MEST-27	F3	10/30/01	1114	2798. 35	2.50	ok			2 m
	7,10 3, 5		10/29/01	1208	2809, 90	2.50	OK		PR	7W 3
219	SEST-27	G3	10 30 01	1202	2833.81	2,26	0人			5w/
			10/30[0]	0709	12396.59	2,50	OK		RK	3 ~ 5w
aao	SALT-28	m3	10/31/01	0707	12420.54	2,40	4.		~···	5W/
			10/30/01	6810	3112.24	2.49	94		RK	300
221	CHUT-28	C3	10/31/01	0752	3/35.94	a.5a				3W/
			10/30/01	0913	1986.03	3.48	or		RX	5W
222	LJET-28	L3	10 31 101	0848	2009.61	2.44				3W/
		1,00	10/30/01	1024	4366,99	3.50	OK	POWER OUTAGE ? (4 HR)	RK	5W
<i>aa</i> 3	PMST-28	K3	10 31 101	0941	4386.27	2.50	OK		R	5W/
		72	10/30/01	1117	2798.40	2.54	OK		K	5W
224	MEST-28	F3	10/3/101	1033	2821, 66 2833, 94	2,50	OR		R	5W/
	10	A3	10/30/01	1310	2857,02	2.44	OK			201
225	SEST-28	رحود	10/3/101	1115	12420.92	2.50	6K			04/20
		 	11/4/01	0643	12444.88	2.50	014		15/=	9020
336	5ALT - 29	M3	11/5/01	0645	1240.52	2.50	OK			1 4/
,,,,	- 4 - 10 -	I3	11/4/01	0657	12445.10	2.39	οK	·	DF.	Ofon
127	SALT-29C	43	11/4/01	0750	3/36.13	2.50	OK	HELICOPTER SPRAYING 300 m	10	CHOW
230	CHUT-29	C 3	11/5/01	6803	3166.34	2.43	OK	NOWTH (WIND FROM EAST)	IS F	ZOL
000	C/10/-01	-	11/4/01	0750	3136.13	2.49	OK	.,	15/2	Clan
229	CHUT - 29C	13	11/5/01	0819	3160.64	2.44	OK		<i>F=</i>	VOD
"	C1/01 510		11/4/01	0348	2010.06	2.50	OK		K	Colar
230	LJET-29	43	11/5/01	0932	2.34.61	2.56			KOC	17.00
			11/4/01	0048	2010.06	2.50	orc	1	Kac	CYCAP
23/	LJET-29C	J3	11/5/01	0911	2034.42	2.60	OK			
231	•		11/4/01	0944	4463.32	2.56	614	4	15/15	Chan
232	PMST - 29	K3	11/5/01	1042	4508.28	255	OK			\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
			11/4/01	2944	4483.32	7.50	ok	4	K	0/00
233	pmsT-29C	33	11/5/01	1033	4508.14	2,43	OK		1./ >	10
			11/4/01	1057	2821.55	250	OK	4	12	St Car
234	MEST-29	F3	11/5/0/	1154	2846.85	2.70	K = Clos	ar, P = Partly Cloudy, C = \geq 75% Cloudy, F = F	og. & R = R	
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Project: MITC Ambient Air Monitoring in Monterey & Santa Cruz Counties

Project # : P-01-004 On Flow: 2.50 +0.02lpm Off Flow: 2.50lpm +10%

Log	Sample	Sampler		ect#:P-0	1-004 On Flow: 2	Flow	Leak	TFlow: 2.50lpm ±10% Comments	Weather	Initials
#	Name	ID	On	On	On	On	On		K,P,C,F&R	
274.24	-1 1/21/21/21/21	Number		Off	Off	Off	Off		175	Off California
			11/4/01	1057	2521.89	2.50	OK			1 /
2.35	MEST-29C	E3	11/5/01	1143	2846.65	2.50	OK		K	CAL
1			10/4/01	1141	2357.23	2.50	9K			
236	SEST- 29	G3	11/5/01	1237	2882.16	2-35	OK		K	COCO
			16/4/01	1141	2857.23	2.50	OR		1/	~
237	SEST-29C	A3	11/5/01	1240	2882.32	2.51	OK		15/10	Cocar
			11/5/01	0707	12445.29	2.50	OK	·	F	mp!
238	SALT-30	M 3	11/6/01	0633	12468.72	2.44	OK		/oc	CILEDI
			11/5/01	0715					F	OST.
239	SALT- 30TB			· -				TRIP BLANK		
			11/5/01	0828	3/60.78	2.50	·cK		F	Office
240	CHUT - 30	c3	11/6/01	0741	3183.99	2.56	oK		P	J'ON
		, ,	11/5/01	0930	2034.75	2.50	0K		P	(1)
241	LJET-30	L3		0841	2051.92	2.49	OK	, <u> </u>	Foc.	Las
1	A455 30		11/5/01	1055	45 68.51	2.50	OK		K//	a
247	PMST-30	E 2	11/6/01	0958	4531.55 2846.95	2.49			y oc	COP
242	MEST-30	F3	11/6/01	1130	3370.28	2.50	OK		15 oc	Office
	7,1201				2882.52	2.50	oK.			7
244	SEST-30	G3	7			2.59	S/C		150c	BOOK
211			11/6/01	0641	12468.84	2.50	OK			
245	5467-31	m3	11/7/01	0619	12492.45	2.49	OK		OCA	CALCON
				675/		2.50	OK			
246	CHUT-31			5721	32.7.65	2.49	OK		13/5	SCAN
						2.50	OK	. •		77
247	LJET - 31	L3	11/7/01	0838	2031.87	2.49	OK		K	Olge
			11/6/01	1602	4531,63	250	oF		00	me
248	PMST-31	K3	1/17/01		4555.34	2.52	OK		1<	2001
			11/6/61	1135	7870.53	2.50	OK		05	Cellan
249	MEST-31			1101		2.64	oK		OK	Cyl
						2.51	OK		ود	M
250	SEST-31	G3		1155	2929. 46	2.52	6K		K	XOV
] a	-4		7 7		1 2 3	2.50	oK		4	al
25/	5ALT-32					2.56	OK		K	101
20	241 - 22	. 🦔 🗀		6737			oK		F	(a)
	CHUT-32	()	11/8/01 Baga 44	6700			OK	D = Borthy Cloudy C = > 759/ Cloudy E = Eo		Y COP

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Project: MITC Ambient Air Monitoring in Monterey & Santa Cruz Counties

Project # : P-01-004 On Flow: 2.50 +0.02lpm Off Flow: 2.50lpm +10%

253 , 254 ,	Name LJET-32 PMST-32 MEST-32 SEST-32	ID Number L3 K3 F3 G3	On Off (1/7/4/ 11/8/4/ 11/7/6/ 11/8/6/ 11/7/6/ 11/8/6/	On Off 0844 0748 0952 0954 1167 1069	On Off 2 ∘ 81.98 21 • €.04 4555.45 4578.48 2894.06 2717.08	On Off 2.50 2.55 2.50 2.47 2.50	On Off oK oK oK	KK	COS
253 , 254 ,	LJET-32 PMST-32 MEST-32	L3 K3 F3	11/7/01 11/8/01 11/7/01 11/8/01 11/8/01 11/8/01	0844 0748 0952 0954 1167	2081.98 2105.84 4555.45 4578.48 2894.06	2.50 2.55 2.50 2.47	oK oK	Off K	COS
254	PMST-32 MEST-32	K3 F3	11/8/01 11/7/01 11/8/01 11/8/01 11/8/01	6748 6952 6954 1167 1069	2105.04 4555.45 4578.48 2894.06	2.55 2.50 2.47	oK OK		Cos
254	PMST-32 MEST-32	K3 F3	11/7/01 11/8/01 11/7/01 11/8/01 11/7/01	0952	4555.45 4578.48 2894.06	2.50 2.47	ok		Coco
55	MEST-32	F3	11/8/01 11/8/01 11/8/01	0954 1167 10 69	4578.48 2894.06	2.47		KK	1/09/
55	MEST-32	F3	11/7/01 11/8/01	1167	2894.06		oK		1/09/
55	MEST-32		11/7/01 11/8/01	10 69		2.50			
	1		11/7/01		2917-08		OK	K	Office
56 5	SEST-32	<u>63</u>		1201		2.51	OK	K	CAT
56 3	SEST-32	<u>G3</u>	11/8/01	1	2929.56	2.49	OK	K	C)
		}		1403	2952.58	2.46	OK	K	COF
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Appendix VI

Pesticide Ambient Sampling Procedures for Adsorbent Tubes

Pesticide Ambient Sampling Procedures For Adsorbent Tubes

Overview:

- -Collect samples for 24 hour periods; Four sampling periods per week per site; Five sampling sites plus an urban background site (e.g., ARB Bakersfield station).
- -Collect a collocated sample from each site on the second or third sampling period per week.
- -Submit 1 trip blank per week, per cartridge type.
- -With the trip blank there normally will be 31 samples shipped per week, per cartridge type.
- -4 field spikes will be run at the ARB site (time collocated exactly with the ambient sample. The field spikes will be distributed over the monitoring period (e.g., 1 per week every other week). A trip spike will also accompany each field spike. These field and trip spikes will be logged in and shipped along with the regular samples. The field and trip spikes will be kept on dry ice during transport to and storage in the field.
- -All samples are stored either in an ice-chest on dry ice or in a freezer.
- -The field log sheet is filled out as the sampling is conducted. The originals stay in the field binder. Please include a copy with sample shipments. <u>All</u> QA samples must be logged onto the log sheet.
- -The chain of custody (COC) forms are filled out prior to sample shipment; the originals are shipped with the samples; make and retain copies if desired (not necessary).
- -(Disregard if samples are driven back to Sacramento) The samples are shipped by UPS, next day delivery, to 13th and T. This is normally done each Monday. The original chain of custody sheets must accompany the samples. The samples are shipped on 5 pounds of dry ice. Review the COCs and log sheet to insure that all documentation is correct and that the appropriate QA samples have been included.

Sampling Procedure:

Materials that will be needed on the roof to conduct the sampling include:

- -Clip board with log sheets
- -pencils/pens
- -sample labels
- -sample cartridges
- -end caps
- -plastic test tubes
- -0 to 100 ccpm mass flow meter (MFM) with battery
- -0 to 5 Lpm mass flow meter (MFM) with battery

Figure out your route for sampling the six locations and try to keep this the same throughout the study. In general, try to make each sampling period 24 hours; e.g., if start time is 11:10 then end time should be 11:10. (round off to the nearest 5 minutes.) The sample period may not always be exactly 24 hours; but that is the target time frame.

Preparation and Set-up

On the way to the first site, plug the MFMs into the batteries. It takes the MFMs about 10 minutes to warm up before they can be used. Leave the MFMs plugged in until the last sample for the day is taken; then unplug for the night to minimize drop in battery charge. Recharge the batteries once per week to be on the safe side.

Upon arrival at the site, check in if needed. Fill out the sample labels for that site. I suggest a backpack and/or fannypacks to carry the stuff to the roof.

Securely attach one adsorbent sample cartridge to the sampling tree. MAKE SURE THE ARROW ON THE CARTRIDGE IS POINTING TOWARDS THE SAMPLE LINE.

Set the rotameter roughly to the appropriate flow rate. Perform the leak check on each sample line by placing a plastic tube cap over the inlet of the cartridge (with the pump on). The rotameter ball should fall to zero. The leak check should be performed before setting the flows with the MFMs.

Using the MFMs set the flow rates exactly to 2.5 Lpm, 90 ccpm and 75 ccpm for the different cartridges.

Make sure that the rain/sun cover is pulled down over the sample tube.

Fill out the log sheet, including: log #, start date, time, start counter reading, leak check OK, any comments and the weather conditions.

Sample collection and Shipment

Measure (do not re-set) the flow rates at the end of the sampling period with the MFMs; leak check the sample lines; record the end data on the log sheet.

Remove the sample cartridge and cap the ends. Attach the sample label like a flag on the secondary end of the tube. Make sure that the label does not cover the glass wool separating the primary and secondary beds in the cartridge.

Place the cartridge in the plastic test tube shipping container.

Place all the samples for each day (6) in a zip-lock bag and place on <u>dry ice</u> in a cooler or in a freezer. While driving the route the collected samples need to be kept on dry ice.

Collect the collocated (duplicate) samples from each site on the second or third sampling period per week. These should be started and stopped at the same times as the regular samples.

Collect a trip blank (TB) for each method, once per week, while at one of the field sites. It doesn't matter which site (or which day) but note it in the comment section of the log sheet. The TB is collected by breaking the ends off of a tube, capping and labeling as usual and storing along with the rest of the samples. Log the TB into the log sheet.

APPENDIX VII

Use Information and Air Monitoring Recommendations for Field Fumigations with the Pesticide Active Ingredients 1,3-Dichloropropene, Chloropicrin, Metam Sodium and Methyl Bromide



Department of Pesticide Regulation



Paul E. Helliker Director

MEMORANDUM

Winston H. Hickox Secretary, California Environmental Protection Agency

TO:

Jeff Cook, Chief

Air Resources Board

Monitoring and Laboratory Division

Quality Management Branch

PO Box 2815

Sacramento, California 95812

FROM:

John S. Sanders, Ph.D., Chief

John J. Sanders Environmental Monitoring Brand

(916) 324-4100

DATE:

July 25, 2001

SUBJECT:

UPDATED MONITORING RECOMMENDATIONS FOR 2001

As recently discussed, the Department of Pesticide Regulation (DPR) would like to modify and clarify its recommendations for monitoring in 2001. First, DPR is withdrawing its request for the Air Resources Board (ARB) to conduct application-site monitoring of structural fumigations this year, including both field sampling and laboratory analysis. However, DPR may request this monitoring in future years.

Second, application-site monitoring for field fumigations should be conducted at 20 meters from the edge of the fumigated area, or the buffer zone distance required for the fumigation, whichever is greater. The size of the buffer zone will vary with method of application, number of acres, and application rate. In addition, individual county agricultural commissioners may adjust the buffer zones recommended by DPR for local conditions. ARB staff should consult with the agricultural commissioner in the county where monitoring will occur to determine the buffer zone size for a specific fumigation. In the case of methyl bromide/chloropicrin fumigations, an outer buffer zone distance and an inner buffer zone distance are specified. Monitoring should occur at the outer buffer zone distance, since this is the buffer zone that pertains to nearby residents. County agricultural commissioners may or may not require buffer zones for metam-sodium fumigations.

All other monitoring recommendations still apply, as described in the enclosed document. If you have any questions, please feel free to contact Randy Segawa at (916) 324-4137, or contact me.

Enclosure

cc: Randy Segawa, DPR Ron Oshima, DPR Lynn Baker, ARB

Staff Report

Use Information and Air Monitoring Recommendations for Field Fumigations with the Pesticide Active Ingredients 1,3-Dichloropropene, Chloropicrin, Metam Sodium, and Methyl Bromide

May 2001

By
Johanna Walters
Environmental Research Scientist,
and
Pam Wales
Associate Information Systems Analyst



ENVIRONMENTAL HAZARDS ASSESSMENT PROGRAM

STATE OF CALIFORNIA
Environmental Protection Agency
Department of Pesticide Regulation
Environmental Monitoring Branch
1001 | Street
Sacramento, California, 95814

USE INFORMATION AND AIR MONITORING RECOMMENDATION FOR FIELD FUMIGATIONS WITH THE PESTICIDE ACTIVE INGREDIENTS 1,3-DICHLOROPROPENE, CHLOROPICRIN, METAM SODIUM, AND METHYL BROMIDE

A. BACKGROUND

This recommendation contains general information regarding the physical-chemical properties and the historical uses of 1,3-dichloropropene, chloropicrin, metam sodium, and methyl bromide. The Department of Pesticide Regulation (DPR) provides this information to assist the Air Resources Board (ARB) in their selection of appropriate locations for conducting pesticide air monitoring operations.

1,3-Dichloropropene

Table 1 describes some of the physical-chemical properties of 1,3-dichloropropene.

Table 1. Some Physical-Chemical Properties of 1,3-Dichloropropene¹.

Chemical name	(EZ)-1-3-dichloropropene
Common name	1,3-dichloropropene
Some tradenames [†]	Telone II, Tri-Form
CAS number	542-75-6
Molecular formula	C ₃ H ₄ CL ₂
Molecular weight	111.0
Form	Colorless-to-amber liquid with sweet penetrating odor (Tomlin, 1997)
Solubility	Water: 2.18 g/L at 20°C
Vapor pressure	34.3 mmHg at 25°C
Henry's Law Constant (KH)	2.29 X 10 ⁻³ at 25°C
Soil adsorption Coefficient (Kd)	0.391
Aerobic soil metabolism half-life	11.5 to 53.9 days
Anaerobic soil metabolism half-life	2.5 days at 25°C (Tomlin, 1997)

Data from Kollman and Segawa, 1995

The technical product is a mixture of approximately equal quantities of (E)- and (Z)- isomers (figures 1a and 1b), of which the (Z) isomer is more nematicidally active The chemical is phytotoxic to plants and is rapidly metabolized to normal plant constituents. In soil, 1,3-dichloropropene undergoes hydrolysis to the respective 3-chloroallyl alcohols and is considered non-persistent (Tomlin, 1997).

[†] <u>Disclaimer</u>: The mention of commercial products, their source, or their use in connection with material reported herein is not to be construed as either an actual or implied endorsement of such products.

Figure 1. The Chemical Structures of the 1,3-Dichloropropene Isomers.

1,3- Dichloropropene is reported to hydrolyze to 3-chloro-2-propen-1-ol, which may be biologically oxidized to 3-chloropropenoic acid (Montgomery, 1997). Breakdown of this chemical eventually yields carbon dioxide (Connors *et al.*, 1990). Chloroacetaldehyde, formyl chloride, and chloroacetic acid are formed from the ozoneation of 1,3-dichloropropene at 25°C and 730 mmHg (Tuazon *et al.*, 1984).

1,3-Dichloropropene has an LC₅₀ (96 hour) of 3.9 mg/L for rainbow trout and 7.1 mg/L bluegill sunfish and an oral and contact LD₅₀ (90 hour) of 6.6 μ g/bee (Tomlin, 1994).

Chloropicrin

Table 2 describes some of the physical-chemical properties of chloropicrin.

Table 2. Some Physical-Chemical Properties of Chloropicrin¹.

Chemical name	trichloronitromethane
Common name	Chloropicrin
Some tradenames	Chlor-O-Pic
CAS number	76-06-2
Molecular formula	CCl ₃ NO ₂
Molecular weight	164.4
Form	Colorless liquid with a lachrymatory action (Tomlin, 1997).
Solubility	Water: 2.00 g/L at 25°C
Vapor pressure	23.8 mmHg at 25°C
Henry's Law Constant (KH)	2.51 x 10 ⁻³ at 25°C
Soil adsorption Coefficient (Kd)	0.139- 0.311
Aerobic soil metabolism half-life	.374- 5.13 days

Data from Koliman and Segawa, 1995

Chloropicrin (figure 2) moves rapidly in soils within twelve inches of injection, but may diffuse to maximum of four feet in sandy soil (EXTOXNET, 1996). Chloropicrin is metabolized in soils by sequential reductive dechlorination (Mongomery, 1997). The end products are thought to be nitromethane and small amounts of carbon dioxide. Since it is only slightly soluble in water, chloropicrin will not move rapidly into aquatic environments. Chloropicrin has a higher density than water and will tend to sink to the bottom of surface water. Chloropicrin photodegrades to carbon dioxide, bicarbonate, chloride, nitrate, and nitrite with a half-life of 31.1 hours (EXTOXNET, 1996).

Figure 2. The Chemical Structure of Chloropicrin.

Chloropicrin

Chloropicrin vapor is heavier than air and spreads along the ground (Howard, 1991). It is efficiently photolyzed in the atmosphere to phosgene, nitric oxide, chlorine, nitrogen dioxide, and dinitrogen tetroxide (EXTOXNET, 1996; Mongomery, 1997). When chloropicrin is heated to decomposition, toxic fumes of nitrogen oxides and chlorine are released (Montgomery, 1997).

Chloropicrin is toxic to fish with an LC₅₀ (96 hour) of 0.0765 mg/L for rainbow trout and 0.105 mg/L bluegill sunfish. It is nontoxic to bees when used as recommended (Tomlin, 1997).

Metam sodium

Table 3 describes some of the physical-chemical properties of metam sodium.

Table 3. Some Physical-Chemical Properties of Metam Sodium¹.

Chemical name	Sodium methyldithiocarbamate
Common name	Metam sodium
Some tradenames	Vapam
CAS number	137-42-8
Molecular formula	$C_2H_4NNaS_2$
Molecular weight	129.2
Form	Colorless crystalline dihydrate (The Agrochemicals Handbook, 1991).
Solubility	Water: 9.6x10 ⁴ g/L at 25°C

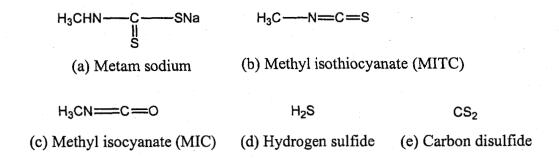
Vapor pressure	Nonvolatile (The Agrochemicals Handbook, 1991).
Aerobic soil metabolism half-life	1.6 x 10 ⁻² days
Anaerobic soil metabolism half-life	<1 day

Data from Kollman and Segawa, 1995

Metam sodium (figure 3a) is a soil fumigant, which acts by decomposition to methyl isothiocyanate (MITC) (figure 3b) with a DT₅₀ of 23 minutes to 4 days when in contact with moist soil (Tomlin, 1997). While metam-sodium is non-volatile, MITC has a relatively high vapor pressure (16.0 mmHg at 25°C) and leaves the soil primarily due to volatilization (Leistra and Crum, 1990). Factors affecting the volatilization rate of MITC from soils include: soil temperature, soil type, soil pH, and soil moisture content (Ashley *et al.*, 1963).

In air, the primary MITC transport and transformational pathway is gas phase photolysis. In laboratory experiments, using ambient solar radiation, MITC half-lives ranged from 29 to 39 hours and resulted in the production of methyl isocyanide, methyl isocyanate (MIC) (figure 3c), methylamine, N-methyl formamide, sulfur dioxide, hydrogen sulfide (figure 3d), and carbonyl sulfide (figure 3e). Research suggests that MIC may be the major stable photoproduct formed in the atmosphere (Geddes *et al.*, 1995; Alvarez and Moore, 1994).

Figure 3. The Chemical Structures of Metam Sodium and its Breakdown Products of Concern.



The decomposition of metam sodium results in low concentrations of two other highly volatile decomposition products: hydrogen sulfide (H₂S) and carbon disulfide (CS₂). The dominant reactions of H₂S and CS₂ in the atmosphere are by daytime reaction with the OH radical. Calculated half-lives of H₂S and CS₂ are 2.5 days and approximately 2 weeks, respectively (Atkinson *et al.*, 1997; Hein *et al.*, 1997).

Metam sodium is toxic to fish with an LC₅₀ (96 hour) of 0.079 mg/L for rainbow trout and 0.39 mg/L bluegill sunfish. It is nontoxic to bees when used as recommended (Tomlin, 1997).

Methyl Bromide

Table 4 describes some of the physical-chemical properties of methyl bromide.

Table 4. Some Physical-Chemical Properties of Methyl Bromide¹.

Chemical name	Bromomethane
Common name	Methyl bromide
Some tradenames	Metabrom, Terr-O-Gas 75
CAS number	74-83-9
Molecular formula	CH₃Br
Molecular weight	94.9
Form	Non-flammable, colorless, odorless gas at room temperature (Tomlin, 1997).
Solubility	Water: 13.4 g/L at 25°C
Vapor pressure	$1.7x \ 10^3 \text{ mmHg}$
Henry's Law Constant (KH)	1.59x10 ⁻² (calculated value)
Soil adsorption Coefficient (Kd)	3.45- 9.4
Aerobic soil metabolism half-life	.15- 17 days
Anaerobic soil metabolism half-life	1.63- 6.0 days

Data from Kollman and Segawa, 1995

Methyl bromide (figure 4) readily evaporates at temperatures normally encountered during fumigation, but some of the chemical may become entrapped in soil microspores following application (EXTOXNET, 1996). Transformation of methyl bromide to bromide increases as the amount of organic matter in the soil increases. Methyl bromide hydrolyzes in water forming methane and hydrobromic acid with an estimated hydrolysis half-life of 20 days at a water temperature of 25°C and pH 7 (Montgomery, 1997).

Figure 4. The Chemical Structure of Methyl Bromide.

H₃C-Br

methyl bromide

Methyl bromide is moderately toxic to fish with an LC_{50} (96 hour) of 3.9 mg/L. It is nontoxic to bees when used as recommended (Tomlin, 1997).

B. CHEMICAL USES

1,3-Dichloropropene

As of December 2000, thirteen products containing 1,3-dichloropropene were registered for use in California. 1,3-dichloropropene is a multi-purpose liquid fumigant used to control nematodes, wireworms, and certain soil borne diseases in cropland. It is used for pre-planting control of most species of nematode in deciduous fruit and nuts, citrus fruit, berry fruit, vines, strawberries, hops, field crops, vegetables, tobacco, beet, pineapples, peanuts, ornamental and flower crops and tree nurseries. It also has secondary insecticidal and fungicidal activity (Tomlin, 1994).

In California's agricultural setting, growers primarily use 1,3-dichloropropene on carrots, sweet potatoes, potatoes, wine grapes, and for preplant soil preparation. 1,3-dichloropropene recommended label use rates range from 85 to 522 pounds active ingredient (AI) per acre depending on soil type or texture for a broadcast application and 2 to 12 pounds AI per 1000 feet of row per outlet depending on soil type or texture.

The 1,3-dichloropropene product label offers several methods for application, including: broadcast (using chisel, offset swing shank, Nobel plow or plow-sole application equipment) and row application. Immediately after application, the soil must be "sealed" to prevent fumigant loss and to ensure that an effective concentration of fumigant is maintained within the soil for a period of several days. Sealing for a broadcast treatment can be accomplished by uniformly mixing the soil to a depth of 3 to 4 inches to eliminate chisel or plow traces. Sealing for row treatments can be accomplished by disrupting the chisel trace using press sealers, ring rollers, or by reforming the beds and following with such equipment. Application of a non-perforated plastic film can improve sealing but does not do away with the need to eliminate chisel traces. 1,3-dichloropropene is available as a liquid fumigant, is a restricted use pesticide due to its high acute inhalation toxicity and carcinogenity, and includes the Signal Word "Warning" on the label.

Chloropicrin

As of December 2000, forty-seven products containing chloropicrin were registered for use in California. Chloropicrin is primarily used as a preplant soil fungicide to control root-attacking pathogens and for the control of nematodes, insects and weed seeds. It is also used as a fumigant for stored cereals and grains, to treat wood poles and timber for internal decay, and as a warning agent for odorless structural and soil fumigants.

In California's agricultural setting, chloropicrin is mainly used on strawberries, preplant soil application, tomatoes, and outdoor grown transplants. According to the label for Chlor-O-Pic® (which contains 99% of active ingredient), chloropicrin's primary use is for control or suppression of plant parasitic causing organisms including nematodes, the bacterial pathogen *Pseudomonas solanacearum*, fungi in the genera *Cylindrocladium*, *Fusarium*, *Phytophthora*, *Pyrenochaeta*, *Ptythium*, *Rhizoctonia*, *Sclerotium*, and *Verticillium*, the clubroot organism *Plasmodiophora*, and the soil pox organism *Actinomyces ipomoea*. Control of certain soil-infesting insects such as cutworms, grubs, and wireworms may also be obtained as well as suppression of weeds if used

with a tarpaulin. The label gives soil fumigation rates of 148.5 to 495 pounds AI per acre depending on soil and crop; dosage is reduced by 33% if area is covered by a plastic tarp immediately after application. Fumigations should take place at least 14 days prior to planting whenever soil conditions are suitable. Soil should be tilled to a fine, loose condition with a temperature between 60°F and 85°F for best results. For space fumigations the label suggests rates of 0.35 to 0.69 pounds AI per 1000 cubic feet for empty potato cellars, houses, and storages, and 2 to 4 pounds AI per 1000 square feet for empty grain bins.

The chloropicrin product label offers several methods for application including: overall field treatment using a chisel type applicator, row or bed treatment, and probe type point injection for small areas or volumes. The label recommends sealing the field with a plastic tarp or by the use of drag, cultipacker, roller, or float to firm the soil surface immediately behind chisels. Chloropicrin is a restricted use pesticide due to its acute toxicity and includes the Signal Word "Danger" on the label.

Metam Sodium

As of December 2000, twenty-six products containing metam sodium were registered for use in California. Metam sodium is a soil fumigant that acts by decomposition to methyl isothiocyanate, which is phytotoxic to all green plants (The Agrochemicals Handbook, 1991). It is used as a soil sterilant that is applied prior to planting edible crops and controls soil fungi, nematodes, weed seeds, and soil insects.

Metam sodium is used in California mainly on carrots, processing/canning tomatoes, potatoes, and cotton. It is recommended for the suppression or control of soil-borne pests that attack ornamental, food, and fiber crops, weeds and germinating weed seeds such as chickweed, dandelions, pigweed, etc., and soil-borne diseases such as *Rhizoctonia*, *Pythium*, *Phytophthora*, etc. Nematode suppression is achieved when metam sodium converts to MITC and makes contact with active forms of the nematode, preferable juveniles. The label suggests that pre-irrigation may induce some species eggs to hatch and enhance overall performance. Metam sodium recommended label use rates range from 159 to 318 pounds AI per acre depending on crop, target pest, and soil properties. The metam sodium product label recommends sealing the soil at the time of application. Sealing methods include applying a water seal by sprinkler irrigation, tarping, or packing soil with a roller drag, or press wheel.

The metam sodium product label offers several methods for application, including: chemigation (using only those sprinkler systems which deliver large water droplets to prevent excessive loss), soil injection (using shanks, blades, fertilizer wheels, plows, etc.), and by use of rotary tiller or power mulcher. Metam sodium is available as a water-soluble liquid and includes the Signal Word "Danger" on the label.

Methyl Bromide

As of December 2000, fifty-four products containing methyl bromide were registered for use in California. Methyl bromide is a multi purpose fumigant used for insecticidal, acaricidal, and

rodenticidal control in mills, warehouses, grain elevators, ships, etc., stored products, soil fumigations, greenhouses, and mushroom houses. In field fumigations it is used to treat a wide range of insects, nematodes, soil-borne diseases, and seed weeds.

In California's agricultural setting, growers primarily use methyl bromide on strawberries, preplant soil preparation, outdoor container/field grown plants, and outdoor grown transplants. Methyl bromide recommended label use rates range from 1 to 20 pounds AI per 1000 cubic feet for non-food products, 0.2-9 pounds AI per 1000 cubic feet for structures associated with raw or processed commodities, 1 to 2 pounds AI per 1000 cubic feet for processed foods, and 1.5 to 9 pounds AI per 1000 cubic feet for raw agricultural commodities. The methyl bromide product label recommends use rates of 1.5 to 3 pounds AI per 100 cubic feet for almonds and strawberries and 2 to 4 pounds AI 100 cubic feet for sweet potatoes (where fumigations below 70°F may result in damage). The label for methyl bromide also lists tolerances (ppm) and exposure times for raw agricultural commodities and processed foods. For structures and non-food products exposure times are listed. For field applications of methyl bromide, the label suggests waiting two weeks after the exposure period before introducing transplants or vegetative plant parts and waiting 96 hours before planting crop seeds. Methyl bromide is odorless, except at high concentrations, and is generally used with a warning agent such as chloropicrin.

The methyl bromide product labels offer several methods for application, including: chamber and vault fumigation, vacuum chamber fumigation, tarpaulin fumigation, warehouse, grain elevator, food processing plant, restaurant and other structures containing commodities, and shipboard fumigations. Methyl bromide is available as a gas fumigant, is a restricted use pesticide due to its acute toxicity, and includes the Signal Word "Danger" on the label.

Pesticide Use Summary

With DPR's implementation of full pesticide use reporting in 1990, all users must report the agricultural use of any pesticide to their county agricultural commissioner, who subsequently forwards this information to DPR. DPR compiles and publishes the use information in the annual Pesticide Use Report (PUR). Because of California's broad definition for agricultural use, DPR includes data from pesticide applications to parks, golf courses, cemeteries, rangeland, pastures, and rights-of-way, postharvest applications of pesticides to agricultural commodities, and all pesticides used in poultry and fish production, and some livestock applications in the PUR. DPR does not collect use information for home and garden use, or for most industrial and institutional uses. The information included in this monitoring recommendation reflects widespread cropland applications of 1,3-dichloropropene, chloropicrin, metam sodium, and methyl bromide. Use rates were calculated by dividing the total pounds of each chemical used (where the chemical was applied to acreage) by the total number of acres treated.

According to the PUR, the total amount of 1,3-dichloropropene, chloropicrin, metam sodium, and methyl bromide used in California from 1996 to 1999 has ranged annually between slightly under 30,000,000 to over 33,000,000 pounds (Table 5). The majority of California's total use of these chemicals occurred in five counties—Kern, Fresno, Monterey, Imperial, and Ventura. On average the total use for the 15 counties with the highest use accounted for 85% of the total use in

California. Tables 6 through 9 display 1,3-dichloropropene, chloropicrin, metam sodium, and methyl bromide use for each county with use for the years 1996-1999.

In California, growers use 1,3-dichloropropene primarily to control nematodes in carrots, sweet potatoes, preplant soil application and potatoes (Table 10). Chloropicrin is generally used on strawberries, preplant soil applications, outdoor grown transplant/ propagative material, and tomatoes (Table 11). Metam sodium use is dominated by use on carrots, tomatoes, potatoes, and cotton (Table 12). Methyl bromide is used primarily on strawberries, preplant soil applications, and outdoor container/ field grown plants (Table 13). 1,3-dichloropropene is used primarily in March October, and November; chloropicrin and methyl bromide are primarily used in August, September, and October; and metam sodium is used most in July, August, and September (Table 14). Use of these chemicals is difficult to predict as disease and nematode pressure is somewhat dependent on weather and other factors, such as cultural practices. However, assuming that no significant changes in weather occur, use is not expected to change.

Table 5. Annual Cropland Use of 1,3-Dichloropropene, Chloropicrin, Metam Sodium, and Methyl Bromide by County (Pounds Of Active Ingredient)

County	1996	1997	1998	1999	Total
KERN	6,179,916	6,343,794	5,078,461	6,538,208	24,140,379
FRESNO	5,322,191	4,424,105	3,436,569	4,927,546	18,110,410
MONTEREY	3,672,813	3,856,405	3,924,679	4,015,262	15,469,159
IMPERIAL	2,698,543	3,060,034	3,985,985	3,329,458	13,074,021
VENTURA	1,937,362	1,933,891	2,294,369	2,925,988	9,091,609
SANTA BARBARA	1,677,888	1,644,438	1,951,895	2,284,290	7,558,511
MERCED	2,206,557	1,893,274	1,676,518	1,717,253	7,493,602
RIVERSIDE	1,067,009	1,007,764	1,577,736	1,681,653	5,334,162
SANTA CRUZ	1,186,142	1,217,192	1,380,775	1,274,695	5,058,804
STANISLAUS	1,139,627	1,221,184	1,006,163	933,860	4,300,835
TULARE	932,252	1,591,740	658,930	901,350	4,084,272
SAN JOAQUIN	1,053,285	1,143,267	929,413	825,832	3,951,797
LOS ANGELES	540,509	944,109	619,267	884,220	2,988,105
ORANGE	680,472	657,943	762,424	743,593	2,844,432
KINGS	603,013	616,537	664,186	741,837	2,625,573
Total for Top 15 Counties	30,899,575	31,557,674	29,949,368	33,727,044	126,125,671
Percent of CA Total	85	84	86	85	85
Total Statewide Use	36,424,497	37,492,647	34,652,786	39,843,109	148,413,039

Table 6. 1,3-Dichloropropene Use by County for the Years 1996-1999

COUNTY	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
ALAMEDA			1,498									-
AMADOR					5,256							
BUTTE	4,580		3,766					5,111	31,828	9,037	21,953	5,642
COLUSA							4,381					
DEL NORTE							6,967	86,982				
EL DORADO			5									
FRESNO	43,007	75,950	113,535	27,590	13,833	21,374	8,774	31,820	98,265	174,382	371,827	42,808
GLENN												2,522
HUMBOLDT								248	11,279			
IMPERIAL	149,875	36,382	25,195				11,986	38,980	335,458	350,040	97,612	75,791
KERN	103,715	302,427	126,199	36,105	24,765	126,468	723,419	330,359	28,453	268,253	433,043	220,902
KINGS		13,692	27,816	9,719			52,702	11,476	19,113		18,247	5,343
LOS ANGELES	33		300					214	6	19		
MADERA	24,637	41,270	208,790	8,736		9,125					70,258	14,694
MARIN		12										
MENDOCINO										2		
MERCED	17,310	14,968	210,787	120,867	61,943			117	7,254	22,753	238,342	133,959
MODOC				45,362								
MONO				558								
MONTEREY	89,811	68,411	76,629	145,516	247,023	133,280	67,073	31,337	53,952	132,997	242,415	77,919
ORANGE				1			396	400	278			
PLACER				5,783	13,821	5,913		23,211	3,066	6	3	
RIVERSIDE	2,046		14,874			3,344	706	15,457	5,071	22,927		
SACRAMENTO					6,339					7,235	3,460	
SAN BENITO	3,043			4,987		8,972	2,428	161	2,623	18,014	37,671	5,277
SAN DIEGO	6	1,820	3	403	2	1,017	4	1	613			2
SAN FRANCISCO						9						
SAN JOAQUIN	368	20,325	20,373	71,359	42,899	73,571	11,778	111	7,542	80,485	127,232	10,447
SAN LUIS OBISPO			3,076		39,153	806	721	3,038	502	1,480	19,453	2,705
SAN MATEO				1,951	19,489	5,859		717				
SANTA BARBARA	158	22,733	28,162	10,090	39,079	21,326	4	19,046	2	580	225	6,106
SANTA CLARA			5,323	518		233			2,537	4,341	12,738	
SANTA CRUZ		963	4,041	27,016	101,754	31,710	3,449	6,360	5,530	3,638	4,606	1,251
SHASTA				5,970				590				
SISKIYOU	[115,464	6,037	3,129		560	5,692	7,023		
SOLANO	ļ	967	30	512	474				32		8,629	
SONOMA	}			9,345				5		6,970		
STANISLAUS	18,404	6,730	21,670	42,115	38,327		4,988	26,925	40,598	153,663	261,430	47,774
SUTTER			10,588	6,358	2,578			3,916	5,073	49,900	58,195	2,456
TEHAMA	1									1,497		
TULARE		4,265	27,143		3,936		7,385	11,863	54,682	157,153		36,403
VENTURA	1,591	11,507						22,074		1,074	11,094	5
YOLO	91		52		i				1,490	25,687	10	
YUBA				2,418	}					17,676	10,819	

Table 7. Chloropicrin Use by County for Years 1996-1999

COUNTY	JAN	FEB !	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT		DEC
ALAMEDA	25				118	62	177	7	55		21	1
AMADOR	35								1	94	40	28
BUTTE	•		18		209		1	1,823	4,335	1,402	1,411	
COLUSA					3		34					
CONTRA COSTA	1		1	1	1	140	1,350	919	376	253	1	
DEL NORTE				1			161	19,905	1,904			
EL DORADO	59		562	332	78			3,552	248			
FRESNO	19,771	7,019	10,841	3,551	1,322	15,810	31,603	11,538	19,276	27,829	19,673	8,804
GLENN			3,793	14,527								
HUMBOLDT						754		446	11,647			
IMPERIAL	393	74			1		5,779	2,907	16,397	24,393	4,380	786
INYO												
KERN	1,943	3,537	1,294	736	15,482	1,015	8,720	21,726	28,454	8,193	14,820	2,204
KINGS	388	299	278	134	29	22	438	102	46	1,658	714	248
LAKE							1	144	1	8		1
LASSEN		3,629	21,716	1,301				108,183	41,303	566		
LOS ANGELES	433	892	525	368	516	608	685	8,565	4,399	2,367	434	282
MADERA	77	89	189	81	135		361	212	83	111	96	207
MARIN	1	4	3	3	5	11	15	6	. 3	3	2	42
MARIPOSA	·	·		•					1			
MENDOCINO	26	1	2	1	19	1	12	236	174	270	75	1
MERCED	11,576	3,955	55,241	26,687	5,759	5,468	9,689	11,159	22,513	12,246	23,000	44,395
MODOC	11,570	3,755	33,2	20,00	0,,,,,	٠,٠٠٠	.,	15,258	6,341	•		
MONTEREY	3,708	1,010	11,473	4,622	63,502	189,448	361,720		1,325,125	1,226,486	300,647	3,714
NAPA	18	1,010	,	1	4	1	409	403	628	9,049	326	34
NEVADA			39	·	•	_	23			•		
ORANGE	7,139	14,311	8,166	18,913	16,977	11,232	55,921	300,906	157,995	4,327	2,839	17,762
PLACER	,,,,,,	. ,,	1	54	4,998	2,603		1,908	2,710	7	2	526
RIVERSIDE	16,980	38,290	185	151	75	176	3,427	5,110	2,292	578	9,968	11,759
SACRAMENTO	419	517	134	3,449	541	4,226	3,498	695		3,027	1,161	178
SAN BENITO	1,745		1,499	1,747	2,516	2,130	4,026	12,367		49,995	30,062	3,024
SAN BERNARDINO	1	12	20	352	30	24	23	687		6,220	24	19
SAN DIEGO	12,927		63,129	111,047	58,098	57,932	62,225	42,325		9,846	12,877	17,370
SAN FRANCISCO	,	,	,		•	2						
SAN JOAQUIN	3,225	49	26,462	78,440	21,936	3,077	2,697	8,095	8,579	7,584	7,494	1,466
SAN LUIS OPISBO	3,240		30,295	9,874		7,208	6,179	3,651			7,138	7,167
SAN MATEO	895			10		3,692	1,231	773				3
SANTA BARBARA	573			12,610		7,366	2,534	23,299				7,313
SANTA CLARA	8			3,151		8,825	11,214	161				591
SANTA CRUZ	1,670			7,280			64,872					3,649
SHASTA	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-,	7,787			6,087	30,853					
SOLANO			62,844				•	108,107				
SONOMA	1	. 21					2,036					36
STANISLAUS	5						410					
SUTTER	2,700						7,355					
TEHAMA		1										404
ТЕНЕМА		910			•			•	1,692			
TULARE	288							1,746				
TUOLUMNE			,				. ,	- • - • -	•	61		
VENTURA	3,025	5 4,141	10,421	24,647	. (2 ((1	184,927	287,095	810,52	4 507,354			2,824

COUNTY	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
YOLO	20	3	1,047	1,127	14	4	509	1,518	1,104	23	12	
YUBA				1,516	l	1		599	20	574	43	- 16

Table 8. Metam Sodium Use by County for the Years 1996-1999

COUNTY	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
ALAMEDA	3,746	3,418	2,222	343	292	739	413	140	36	224	179	369
AMADOR				105	35		20					
BUTTE				382	231	527	14	1,955	2,006	1,202	723	1,286
CALAVERAS				16					57	39		18
COLUSA	23,253	8,642	52,046	17,206	2,559	1,305	8,515	21,287	17,089	678	1,839	585
CONTRA COSTA	1,152	1,252	7,450	130	119	5	1	479	3,050	6,454	14,498	840
DEL NORTE							89,100	308,811	4,741	2,275		
EL DORADO	1,881	2,250	1,607	1,633	553	1,212	823	350	1,292	1,601	1,614	2,491
FRESNO	3,209,066	1,933,125	4,385,620	852,082	88,634	30,482	299,853	32,594	30,857	201,418	860,837	1,402,770
GLENN		3,175		693	689	874		1,676		254	444	460
HUMBOLDT	19		225	43					38	272	159	
IMPERIAL	133,381	7,146	418	75,983	78	88,015	393,120	3,049,217	4,168,773	2,025,638	550,030	530,877
KERN	1,007,247	697,391	318,414	156,091	212,300	1,394,527	4,384,180	2,560,817	863,876	1,618,772	1,439,630	1,676,242
KINGS	274,520	180,583	377,715	260,333	. 112	123,098	348,509	286,362	8,206	42,796	48,768	19,876
LAKE			98	21						74	,	
LOS ANGELES	46,388	346,405	502,582	114,231	161,289	389	112	243	35,101	59,443	2,114	2,232
MADERA	7,721	69,285	12,671	12,987	1,181	2,999		20,303	58,226	21	24,533	33
MARIN	379	414	247	1	29		3	14		582	229	379
MARIPOSA												- 3
MENDOCINO	22	2,017	411		22				75	139	1,994	17
MERCED	10,879	12,320	537,011	1,090,252	291,407	15,806	12,326	70,511	55	32,032	603	574
MODOC	,		84,197	431,854	58,722				13,907	54,111	4,344	
MONO				169								
MONTEREY	24,457	40,078	23,550	52,838	153,011	29,389	35,936	46,975	106,644	99,752	56,520	27,675
NAPA	13	70	24					81	77	22		
NEVADA	58	58	463	717	865	1,704	1,613	1,615	617	1,694	1,186	775
ORANGE	10,499	37,506	1,228	36,936	56,485	64,954	5,096	28,980	123,048	2,421	500	6,952
PLACER	1,776		2,883	2,498	2,364	1,261	1,373	1,274	797	881	881	6,348
PLUMAS	41	140	137	169	13				25	;		
RIVERSIDE	166,297	113,192	98,121	101,174	139,605	245,581	237,119	310,911	199,406	93,034	63,004	94,166
SACRAMENTO	906		53,359	210,188	25,963	3,527	1,460	21,391	6,640	10,086	4,534	2,922
SAN BENITO	296	1,210	45,684	40,083	6,461	1,185	1,184	7,033	502	4,249	514	223
SAN BERNARDINO	2,048	2,353	2,709	5,080	7,663	16,300	12,701	3,248	11,009	1,303	714	53
SAN DIEGO	10,804	31,860	25,366	51,769	13,322	43,865	32,422	69,272	38,121	1,980	2,351	2,695
SAN FRANCISCO	91	. 31	. 8	8	644	. 2	}			643	964	309
SAN JOAQUIN	80	468	100,496	130,609	65,526	10,066	8,870	4,347	8,176	39,226	35,997	33
SAN LUIS OBISPO	47,410	118,797			143,256	148,856	40,903	30,098	32,761	43,902	61,781	20,709
SAN MATEO	2,642				67,407	37,403	5,405	3,604	4,808	8,043	2,475	3,959
SANTA BARBARA	137,962	83,023	217,270	550,752	685,178	326,559	265,283	7 198,043	3 319,700	121,060	129,810	85,92
SANTA CLARA	8,874											
SANTA CRUZ	1	. () .	70.975	139,303	17,399	3,58	5 90	5 480	4,692	635	5 6

COUNTY	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
SHASTA	20	16	28	82	116	65	41	94	105	200	17	125
SIERRA	463	463	463	717	717				2	225	90	
SISKIYOU	1		15,584	259,049	3,807							
SOLANO	10,906	71,822	330,166	302,902	24,897	33,986	9,431	54,848	21,958	82,758	34,673	
SONOMA	3,306	1,978	3,333	10,004	18,861	32,076	37,062	5,004	3,086	1,001	1,615	2,200
STANISLAUS	3,325	18,698	135,727	298,651	82,015	33,840	61,951	65,148	81,682	68,419	14,635	7,621
SUTTER	141	14,220	87,278	53,061	15,349	678	801	5,406	680	652	872	1,886
TEHAMA	73	118	178	118	235							
TULARE	68,145	28,856	159,086	55,690	77,324	5,053	6,111	252	17,987	7,762	50,168	89,854
TUOLUMNE			83	156						42		
VENTURA	18,966	16,676	129,658	110,349	96,451	45,181	90,802	80,605	29,463	17,679	31,043	15,906
YOLO	194,749	328,146	1,036,242	433,447	69,949	5,923	4,200	3,983	386	1,215	60,064	26,078
YUBA	92	161	106	6		2,289	1,168	1,141	1,154	628	885	1,043

Table 9. Methyl Bromide Use by County for Years 1996-1999

COUNTY	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
ALAMEDA	9,883	4,662	5,709	6,877	14,663	18,374	13,300	7,444	16,620	7,818	9,892	5,022
AMADOR	46	65	78	187	201		90		666	198	53	100
BUTTE	3,066	604	3,240	5,844	26,211	48,315	53	32,065	103,503	383,035	80,154	7,135
CALAVERAS		•	119	341	50	80	220	399	887	351		39 9
COLUSA	285	160	126	852	2,684	924	512	1,713	1,163	6,775	1,676	242
CONTRA COSTA	1,900	1,925	2,276	2,452	2,552	2,442	4,020	5,786	4,148	6,645	5,861	2,946
DEL NORTE				149			32,107	186,361	3,901		150	
EL DORADO	376	490	1,152	722	379	357	50	7,610	639	1,112	234	462
FRESNO	278,379	256,700	302,109	163,905	66,621	60,146	241,664	135,060	462,110	464,541	694,773	456,858
GLENN			43,571	45,653						15,666	7,896	3,555
HUMBOLDT	ļ		60			1,635	147	914	10,614	30	133	
IMPERIAL	489,918	80,509	4,312				21,560	23,359	14,877	117		240,264
INYO						109		110	48			
KERN	400,743	343,518	324,028	141,943	97,114	131,325	378,789	713,818	803,544	373,893	755,459	514,491
KINGS	31,761	16,827	52,608	26,108	5,122	10,104	12,119	10,857	20,417	88,096	188,268	29,943
LAKE			64	2		180	358	30,259	7,312	25,118	406	137
LASSEN		27,584	91,312	3,703				159,290	59,028	1,159		
LOS ANGELES	142,961	147,583	154,466	157,938	146,029	129,466	134,493	172,874	139,296	122,315	119,322	130,189
MADERA	25,137	16,310	53,789	55,070	42,749	354	10,367	27,804	63,474	16,501	20,438	73,015
MARIN	1,282	1,393	1,292	1,559	1,751	2,272	3,416	2,141	1,806	2,525	1,051	1,894
MARIPOSA					3	9	63			44		
MENDOCINO	649	264	771	392	4,583	1,212	4,795	35,919	50,201	67,550	32,884	1,000
MERCED	497,829	664,968	747,617	544,539	170,168	24,774	83,969	106,883	195,614	189,083	326,371	808,022
MODOC				2,283				30,977	12,874			
MONO							76					
MONTEREY	63,321	53,26	183,944	119,009	180,586	377,216	626,175	1,434,119	2,550,621	2,697,820	899,159	28,950
NAPA	262	159	501	3,605	10,330	4,841	13,745	11,855	107,637	325,595	131,750	1,475
NEVADA	260	10:	5 166	144		132	340	62	300	78	108	51
ORANGE	40,419	61,83	2 56,640	69,523	88,181	61,261	179,468	781,776	387,430	35,573	30,549	59,613
PLACER	607	649	9 606	838	15,310	8,971	806	6,365	9,055	2,161	4,691	2,170
RIVERSIDE	914,889	425,69	7 92,061	32,841	70,109	86,311	60,478	184,241	168,114	128,371	431,571	724,454

COUNTY	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
SACRAMENTO	20,382	2,666	4,572	20,069	36,284	14,276	13,884	11,591	4,359	5,540	24,787	3,740
SAN BENITO	2,114	642	36,550	4,199	5,995	29,095	9,634	22,041	54,485	98,580	42,168	440
SAN BERNARDINO	2,873	16,419	3,350	4,552	5,853	3,093	5,499	5,323	42,586	21,846	3,983	3,761
SAN DIEGO	44,024	131,965	175,998	281,942	155,315	159,410	193,965	120,608	129,919	65,114	41,230	60,707
SAN FRANCISCO	168	303	188	382	376	232	448	528	248	187	636	258
SAN JOAQUIN	148,364	62,802	389,172	454,628	126,846	120,278	74,994	159,370	259,202	430,083	448,401	237,871
SAN LUIS OBISPO	22,987	46,517	68,799	26,027	34,881	35,874	36,695	26,525	197,377	184,480	33,111	22,436
SAN MATEO	4,845	4,755	3,431	3,774	17,998	14,792	8,290	8,306	16,205	11,912	4,870	1,768
SANTA BARBARA	9,102	37,099	67,124	76,961	157,071	60,256	32,592	116,267	1,202,802	1,397,695	112,941	34,496
SANTA CLARA	1,307	1,041	1,271	6,202	4,154	19,275	22,978	4,902	34,400	66,606	25,662	2,843
SANTA CRUZ	4,475	8,102	19,977	75,966	83,815	60,505	116,453	496,243	1,037,585	939,436	165,539	7,128
SHASTA			23,804	26,540	7,154	9,148	42,291	234,725	77,277	9,467		54
SIERRA									33	95		
SISKIYOU	ļ		131,117	71,872	28			227,095	58,412	3,686		
SOLONO	1,350	1,584	3,375	19,721	3,704	9,058	6,407	34,879	50,908	111,875	63,564	8,125
SONOMA	3,211	3,261	3,242	4,842	11,518	42,802	96,145	253,471	291,254	518,129	370,308	3,244
STANISLAUS	145,413	145,739	243,735	157,304	65,204	33,290	47,579	153,682	585,153	386,276	415,980	203,933
SUTTER	22,452	2,912	18,963	8,272	19,743	3,749	26,223	210,257	166,121	454,603	293,135	35,548
TEHAMA	2,748	5,739	14,050	42,203	7,258	2,388	1,122	40,438	97,726	88,951	28,030	18,108
TULARE	90,060	305,267	415,665	152,076	30,205	46,791	197,486	165,872	285,543	698,621	504,634	146,078
TUOLUMNE	51		78			123	54	45	50	176		
VENTURA	24,304	54,565	150,943	289,124	385,818	705,922	859,064	2,063,363	1,528,495	125,850	83,477	50,644
YOLO	5,925	5,349	12,029	19,548	35,287	4,493	7,736	48,681	44,430	33,168	19,095	4,804
YUBA	2,698	213	2,434	11,888	618	742	1,227	12,609	16,324	231,995	195,559	11,346

Table 10. Annual Cropland Use of 1,3- Dichloropropene by Commodity (Pounds of Active Ingredient)

Crop	1996	1997	1998	1999	Total
CARROTS, GENERAL	730,564	929,297	923,379	863,111	3,446,351
SWEET POTATO	73,194	75,080	279,827	191,558	619,659
SOIL APPLICATION, PREPLANT-					
OUTDOOR (SEEDBED)	296,937	144,061	273,525	310,194	1,024,717
POTATO (WHITE, IRISH, RED, RUSSET)	93,724	264,134	169,057	164,386	691,301
GRAPES, WINE	24,036	99,350	150,468	222,418	496,272
CANTALOUPE	35,918	15,759	129,331	73,993	255,001
ALMOND	108,408	56,052	109,414	169,054	442,928
BRUSSELS SPROUTS	70,784	72,516	94,870	32,249	270,419
TOMATOES, FOR PROCESSING/CANNING WALNUT (ENGLISH WALNUT, PERSIAN	14,175	42,176	88,090	208,364	352,805
WALNUT)	15,257	26,291	62,276	78,702	182,526
OUTDOOR GROWN CUT FLOWERS OR	,	•	•	•	•
GREENS	199	414	61,125	6,035	67,773
BROCCOLI	24,646	56,417	60,923	139,206	281,192
Total	1,489,838	1,783,544	2,404,283	2,461,269	8,130,944

Table 11. Annual Cropland Use of Chloropicrin by Commodity (Pounds of Active Ingredient)

Стор	1996	1997	1998	1999	Total
STRAWBERRY	1,987,330	1,887,525	1,913,493	2,402,937	8,191,285
SOIL APPLICATION, PREPLANT-					
OUTDOOR (SEEDBED)	197,831	238,694	282,417	277,113	996,055
OUTDOOR GROWN TRANSPLANT	156,286	132,660	179,225	111,408	579,579
TOMATO	79,458	73,609	93,094	136,771	382,932
LETTUCE, HEAD	74,804	82,820	92,755	78,758	329,137
OUTDOOR GROWN CUT FLOWERS OR	•			•	
GREENS	49,097	69,143	69,197	92,797	280,234
OUTDOOR CONTAINER/FIELD GROWN					
PLANTS	64,323	49,531	67,626	90,557	272,037
UNCULTIVATED AGRICULTURAL					
AREAS	19,401	20,938	60,296	20,730	121,365
PEPPERS (FRUITING VEGETABLE),					100 150
(BELL, CHILI, ETC.)	36,928	4,710	38,559	48,981	129,178
LETTUCE, LEAF)	25,965	16,690	26,920	14,756	84,331
CARROTS, GENERAL	3,344	8,422	25,424	43,158	80,348
CELERY, GENERAL	20,223	20,964	24,489	16,322	81,998
Total	2,716,986	2,607,703	2,875,493	3,336,287	11,528,479

Table 12. Annual Cropland Use of Metam Sodium by Commodity (Pounds of Active Ingredient)

Crop	1996	1997	1998	1999	Total
CARROTS, GENERAL	4,602,729	5,823,590	5,779,224	6,430,926	22,636,469
TOMATOES, FOR					
PROCESSING/CANNING	3,655,522	2,673,036	2,640,872	3,496,926	12,466,356
POTATO (WHITE, IRISH, RED, RUSSET)	1,438,776	1,260,222	1,205,154	181,280	4,085,432
COTTON, GENERAL	1,719,734	1,331,770	414,502	656,188	4,122,194
CANTALOUPE	220,529	391,616	335,611	390,573	1,338,329
LETTUCE, LEAF	228,925	269,145	303,975	130,285	932,330
ONION (DRY, SPANISH, WHITE,					
YELLOW, RED,	124,647	182,958	280,294	318,855	906,754
SOIL APPLICATION, PREPLANT-					
OUTDOOR (SEEDBED)	235,749	166,472	223,210	343,179	968,610
PEPPERS (FRUITING VEGETABLE),					
(BELL, CHILI, ETC.)	243,630	238,859	216,619	329,140	1,028,248
SWEET POTATO	313,942	245,066	205,573	362,396	1,126,977
SPINACH	40,435	83,593	173,286	87,820	385,134
LETTUCE, HEAD	548,924	81,316	147,418	34,909	812,567
Total	13,375,538	12,749,640	11,927,736	12,764,476	50,809,400

Table 13. Annual Cropland Use of Methyl Bromide by Commodity (Pounds of Active Ingredient)

Crop	1996	1997	1998	1999	Total
STRAWBERRY	4,374,955	4,041,796	4,251,831	5,178,295	17,846,877
SOIL APPLICATION, PREPLANT- OUTDOOR (SEEDBED) OUTDOOR CONTAINER/FIELD GROWN	1,403,438	2,148,825	1,522,671	1,840,036	6,914,970
PLANTS	1,122,379	922,653	1,064,688	971,280	4,081,000
OUTDOOR GROWN TRANSPLANT	515,562	509,527	547,145	447,077	2,019,311
SWEET POTATO	611,586	766,042	541,923	403,442	2,322,993
ALMOND	613,743	881,792	502,949	267,471	2,265,955
GRAPES, WINE OUTDOOR GROWN CUT FLOWERS OR	1,480,701	897,380	478,272	681,834	3,538,187
GREENS PEPPERS (FRUITING VEGETABLE),	426,511	545,718	444,971	336,322	1,753,522
(BELL, CHILI, ETC.)	344,828	295,151	403,080	498,480	1,541,539
TOMATO	336,194	263,210	304,411	352,727	1,256,542
PEACH	248,082	287,120	280,028	254,673	1,069,903
GRAPES	299,627	569,054	273,836	251,243	1,393,760
Total	11,779,602	12,130,265	10,617,803	11,484,879	46,004,559

Table 14. Monthly Use of 1,3-Dichloropropene, Chloropicrin, Metam Sodium, and Methyl Bromide for 1996-1999 (Pounds of Active Ingredient)

Month	1,3-Dichloropropene	Chloropicrin	Metam sodium	Methyl bromide	Total
JANUARY	474,684	1,245,860	5,419,699	3,223,843	10,364,086
FEBRUARY	626,528	1,268,822	4,069,875	2,676,149	8,641,374
MARCH	1,040,229	2,552,276	8,976,219	4,021,847	16,590,571
APRIL	752,523	2,083,793	5,986,862	3,375,876	12,199,054
MAY	703,671	1,220,610	2,622,504	2,270,923	6,817,708
JUNE	470,029	1,847,256	2,823,720	2,615,827	7,756,832
JULY	926,301	3,227,341	6,472,440	4,211,424	14,837,506
AUGUST	693,268	8,176,708	7,362,082	10,196,781	26,428,839
SEPTEMBER	748,547	10,181,470	6,222,453	13,513,466	30,665,936
OCTOBER	1,543,406	8,297,229	4,632,445	12,340,886	26,813,966
NOVEMBER	2,236,167	2,925,324	3,196,179	6,048,516	14,406,186
DECEMBER	712,671	1,211,593	3,002,645	3,099,199	8,026,108
Total	10,928,024	44,238,282	60,787,123	67,594,737	183,548,166

C. RECOMMENDATIONS

Ambient Air Monitoring

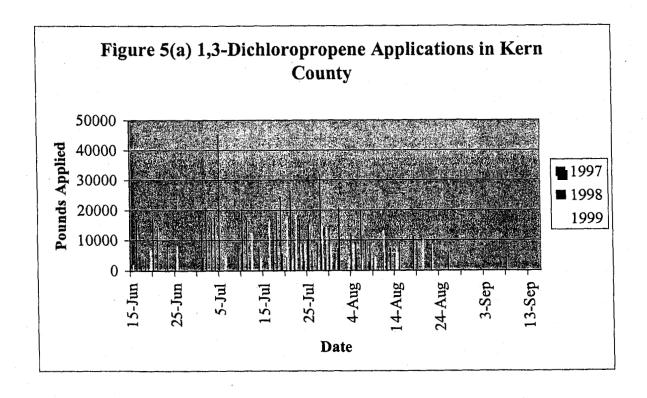
The historical trends in 1,3-dichloropropene and metam sodium use suggest that monitoring should occur over a two month period during July and August in Kern County. Monitoring in Kern County should focus on the use of 1,3-dichloropropene and metam sodium, but since there is significant use of all four chemicals, monitoring should be simultaneous for all four. Figures 5(a-d) display 1,3-dichloropropene, chloropicrin, metam sodium, and methyl bromide use in Kern County during the period from July 1 through September 15 for 1997, 1998, and 1999. Attachments E through H display 1,3-dichloropropene, chloropicrin, metam sodium, and methyl bromide use by section in the Central Valley during 1998 and 1999.

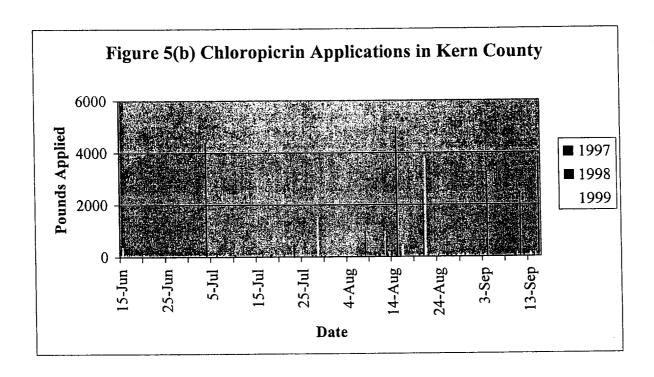
In Monterey and Santa Cruz Counties, historical trends indicate that monitoring for methyl bromide and chloropicrin should take place during September and October. Monitoring in Monterey or Santa Cruz County should focus on methyl bromide and chloropicrin, but since there is significant use of all four chemicals, monitoring should be done simultaneously. Figures 6(a-d) and Figures 7(a-d) display 1,3-dichloropropene, chloropicrin, metam sodium, and methyl bromide use in Monterey and Santa Cruz Counties during the period from September 1 through November 15 for 1997, 1998, and 1999; respectively. Attachments A through D display 1,3-dichlorpropene, chloropicrin, metam sodium, and methyl bromide use by section in the Central Coast during 1998 and 1999.

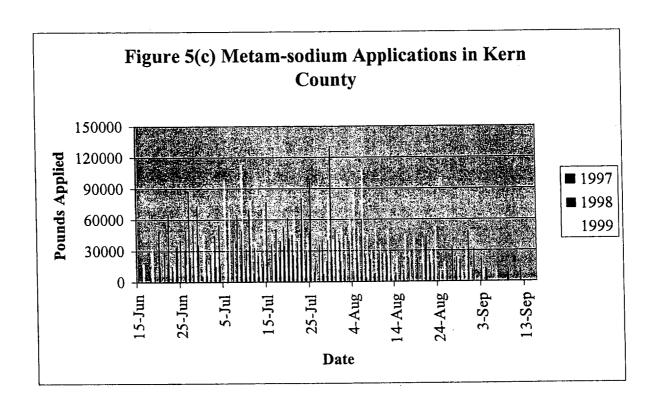
1,3-Dichloropropene, Chloropicrin, Metam Sodium, and Methyl Bromide Monitoring Recommendation

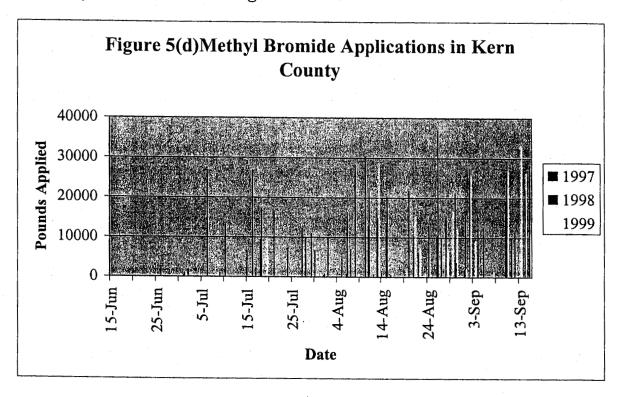
Five sampling sites (5 sites and one urban background site) should be selected in relatively high-population areas or in areas frequented by people (e.g., schools or school district offices, fire stations, or other public buildings). Samples should be collected and analyzed for 1,3-dichloropropene, chloropicrin, methyl bromide, and metam sodium (as the breakdown products methyl isothiocyanate and methyl isocyanate). Monitoring for all four chemicals should be performed simultaneously. At each site, 4 samples per week should be collected randomly over the full seven-day week during the sampling period. Background samples should be collected in an area distant to applications of 1,3-dichloropropene, chloropicrin, metam sodium, and methyl bromide. Target 24-hour quantitation limits of at least 0.01 μg/m³ for 1,3-dichloropropene, 0.1 μg/m³ for chloropicrin, 0.5 μg/m³ for methyl isothiocyanate, 0.05 μg/m³ for methyl isocyanate, and 0.4 μg/m³ for methyl bromide are recommended.

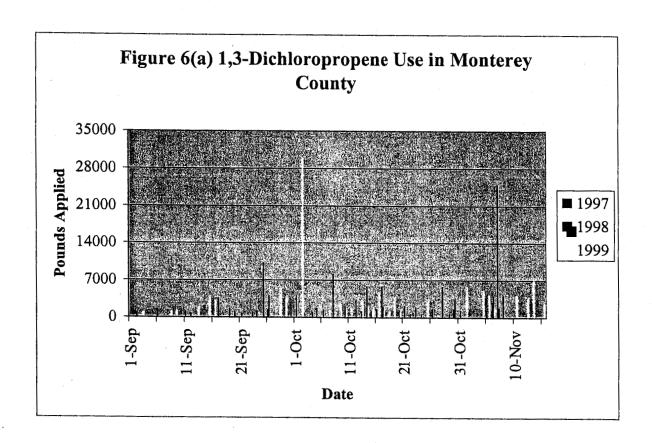
DPR recommends close coordination with the county agricultural commissioner to select the best sampling sites and periods. In addition to the primary samples, replicate (co-located) samples are needed for 4 dates at each sampling location. Field spike samples should be collected at the same environmental conditions (e.g., temperature, humidity, exposure to sunlight) and experimental conditions (e.g., air flow rates) as those occurring at the time of ambient sampling. Additionally, we request that you provide in the ambient monitoring report: 1) the proximity of the sampler to treated or potentially treated fields, including the distance and direction, and 2) the distance the sampler is located above the ground.

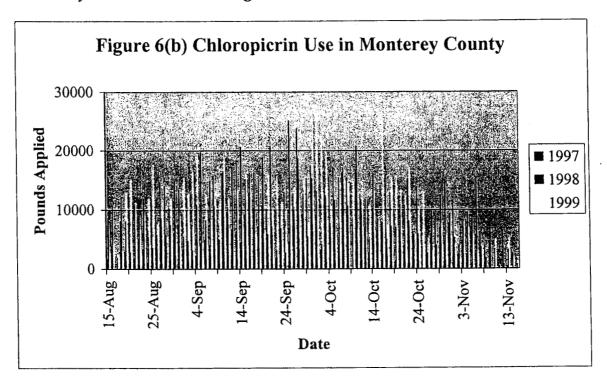


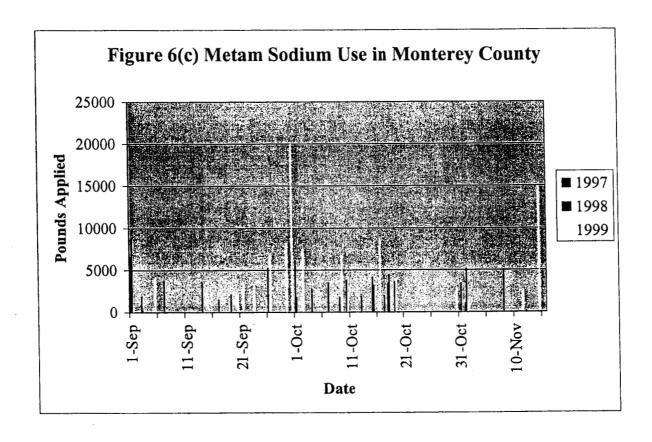


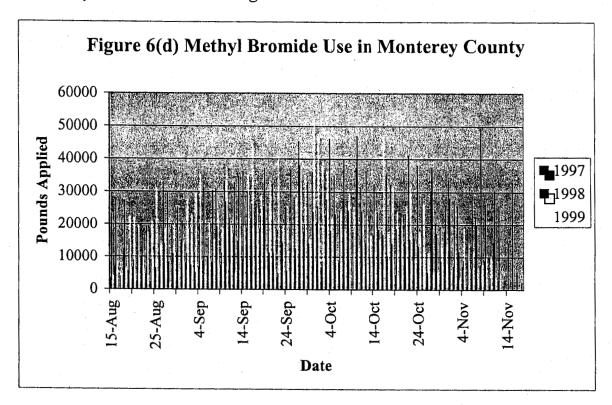


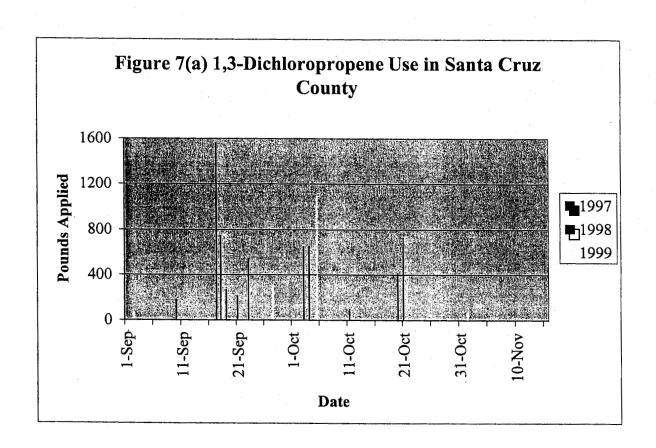


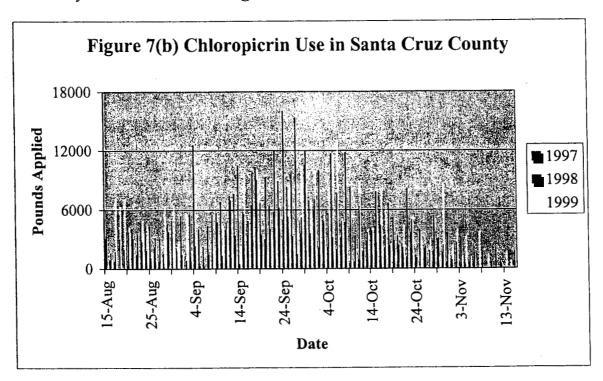


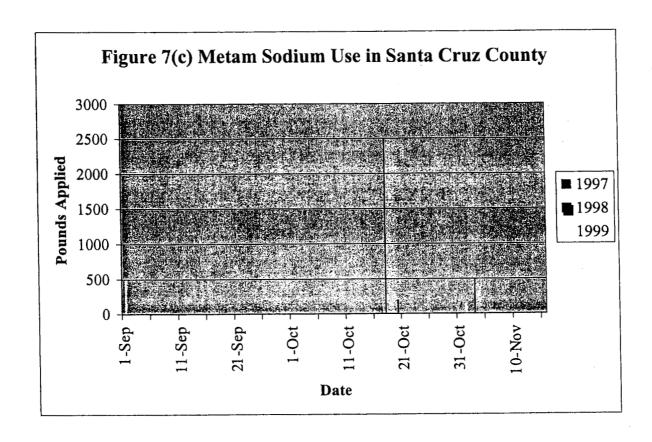


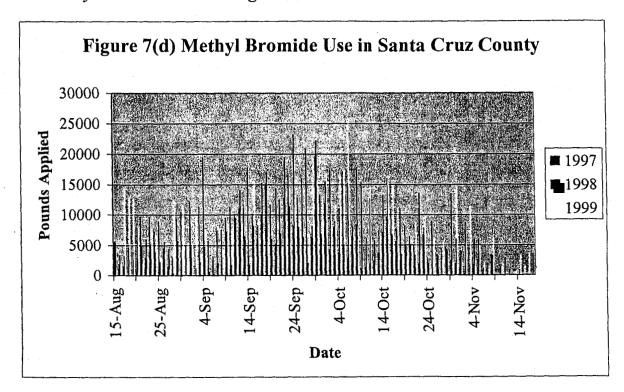












Application-Site Air Monitoring

Application monitoring should be done for the chemicals chloropicrin and metam sodium (as the breakdown products methyl isothiocyanate, methyl isocyanate, hydrogen sulfide, and carbon disulfide). No application monitoring is requested at this time for 1,3-dichloropropene or methyl bromide unless an application of methyl bromide and chloropicrin can be monitored simultaneously. DPR would prefer a bed fumigation of chloropicrin in which methyl bromide is also used so that they can be monitored simultaneously. Ideally, monitoring should occur at a site using the highest allowed rates of use (i.e., between 150 to 400 pounds per acre overall). DPR requests monitoring for metam sodium be a drip irrigation application at a site using the highest allowed rates of use (i.e. about 318 pounds AI per acre). Most applications of chloropicrin and metam sodium using these methods occur in the central coast area.

DPR recommends close coordination with the county agricultural commissioner to select the best sampling sites and date. Ideally, the monitoring study should include samples taken before, during, and post application for 72 hours. To minimize exposure to sampling personnel, we recommend the following revised sampling schedule:

Sample period begins:	Sample duration time
Background (pre-application)	Minimum 12 hours
During application and post-application	Start of application until 1 hour before sunset
1 hour before sunset	Overnight ¹ (until 1 hour after sunrise)
1 hour after sunrise	Daytime (until 1 hour before sunset)
1 hour before sunset	Overnight (until 1 hour after sunrise)
1 hour after sunrise	Daytime (until 1 hour before sunset)
1 hour before sunset	Overnight (until 1 hour after sunrise)

All overnight samples must include the period from one hour before sunset to one hour after sunrise.

In the event that application occurs at night, the alternate day-night schedule should be followed. Frequently, furnigation may take two or more days. In these instances, follow the above schedule from the last day of application, since this will give the most representative air concentration trend following application.

The selected field should be 10 acres in area, or larger. A minimum of eight samplers should be positioned, one on each side of the field and one at each corner. A ninth replicate sampler should be co-located at one position. Ideally, samplers should be placed a minimum of 20 meters from the field. Field spike samples should be collected at the same environmental conditions (temperature humidity, exposure to sunlight) and experimental conditions (similar air flow rates) as those occurring at the time of sampling. Since the four chemicals are used in the area, background samples should collect enough volume to achieve the recommended target 24-hour quantitation limits (see ambient air monitoring section).

Additionally, we request that you provide in the monitoring report: 1) an accurate record of the positions of the monitoring equipment with respect to the field, including the exact distance that the sampler is positioned from the field, and if necessary how the field was divided to treat over several days; 2) an accurate drawing of the monitoring site showing the precise location of the meteorological equipment, trees, buildings, and other obstacles; 3) meteorological data collected at a minimum of 15-minute intervals including wind speed and direction, humidity, and air temperature, and comments regarding degree of cloud cover; 4) the elevation of each sampling station with respect to the field, and the orientation of the field with respect to North (identified as either true or magnetic North); and 5) the start and end time of the application.

Due to the high application rates and high volatility of these pesticides, the potential for exposure is higher than most other pesticides. However, this recommendation should not require any special safety equipment or precautions for sampling personnel.

D. SAFETY RECOMMENDATIONS

1,3-Dichloropropene, Chloropicrin, Metam Sodium, and Methyl Bromide Monitoring Recommendation

Most of the following safety precautions pertain to applicators. The sampling schedule is arranged so that sampling personnel do not need to be near the field during application, so these precautions are not necessary.

1,3-Dichloropropene

The 1,3-dichloropropene product labels warn that 1,3-dichloropropene may cause substantial, but temporary, eye injury if the product gets into the eyes. The product may cause skin irritation, skin burns, allergic skin reaction and be fatal if absorbed through the skin. The vapor may be fatal if inhaled and may cause lung, liver, and kidney damage and respiratory system irritation upon prolonged contact.

Monitoring personnel should use proper protective equipment to prevent exposure to the dust, vapors or spray mist. According to the product labels, proper protective equipment for applicators making direct contact or for applicators outside an enclosed cab includes coveralls, chemical-resistant gloves and footwear plus socks, face sealing goggles, chemical resistant headgear (for overhead exposure) and apron, and a respirator with an organic-vapor removing cartridge. Monitoring personnel should refer to the label of the actual product used for further precautions.

Chloropicrin

The chloropicrin product labels warn that chloropicrin is a poisonous liquid and vapor and is readily identifiable by smell. Inhalation of vapors may be fatal and exposures to low concentrations of vapor will cause irritation of the eyes, nose, and throat. Exposure to high concentrations or for a prolonged period of time may cause painful irritation to the eyes or temporary blindness. Contact with the liquid will cause chemical burns to the skin or eyes and is harmful or fatal if swallowed.

The acceptable air concentration for persons exposed to chloropicrin is 0.1 ppm. If air concentrations exceed 0.1 ppm, an air purifying respirator must be worn; if air concentrations exceed 4 ppm, an air supplying respirator must be worn. The highest concentrations of chloropicrin at 20 m from the field should not exceed 0.05 to 0.08 ppm. The label states that the applicator and other handlers must wear: loose fitting, log-sleeve shirt and long pants, shoes and socks, and full-face shield or safety glasses with brow and temple shields. Monitoring personnel should refer to the label of the product used and should use proper protective equipment to prevent exposure to the dust, vapors, or spray mist.

Metam sodium

The metam sodium product labels warn that metam sodium causes skin damage and may be fatal if absorbed through the skin. Prolonged or frequent contact may cause an allergic reaction. Metam sodium is harmful if inhaled or swallowed and is irritating to eyes, nose, and throat.

Monitoring personnel should use proper protective equipment to prevent exposure to the vapors or spray mist and refer to the label of the actual product used for further precautions. According to

1,3-Dichloropropene, Chloropicrin, Metam Sodium, and Methyl Bromide Monitoring Recommendation

the product labels, proper protective equipment for applicators making direct contact or for applicators outside an enclosed cab includes coveralls, waterproof gloves, chemical resistant footwear plus socks, face sealing goggles, chemical resistant headgear (for overhead exposure) and apron, and a respirator with an organic-vapor removing cartridge. Concentrations should not exceed 0.5 ppm for any of the sampling intervals at the 60 foot sampling distance from the field.

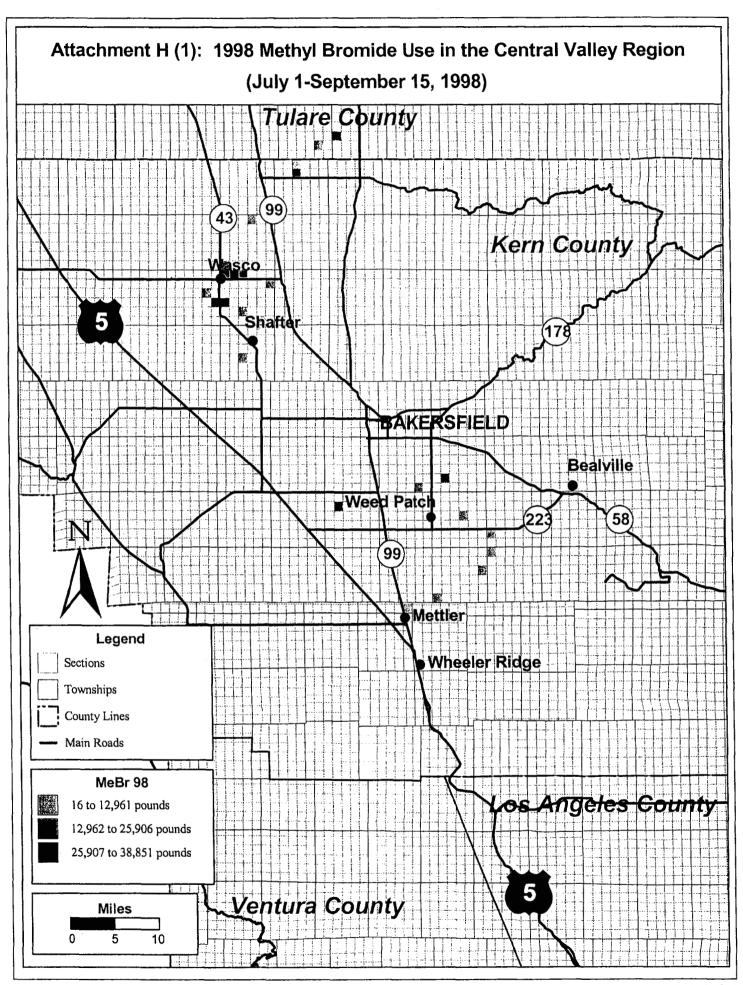
Methyl bromide

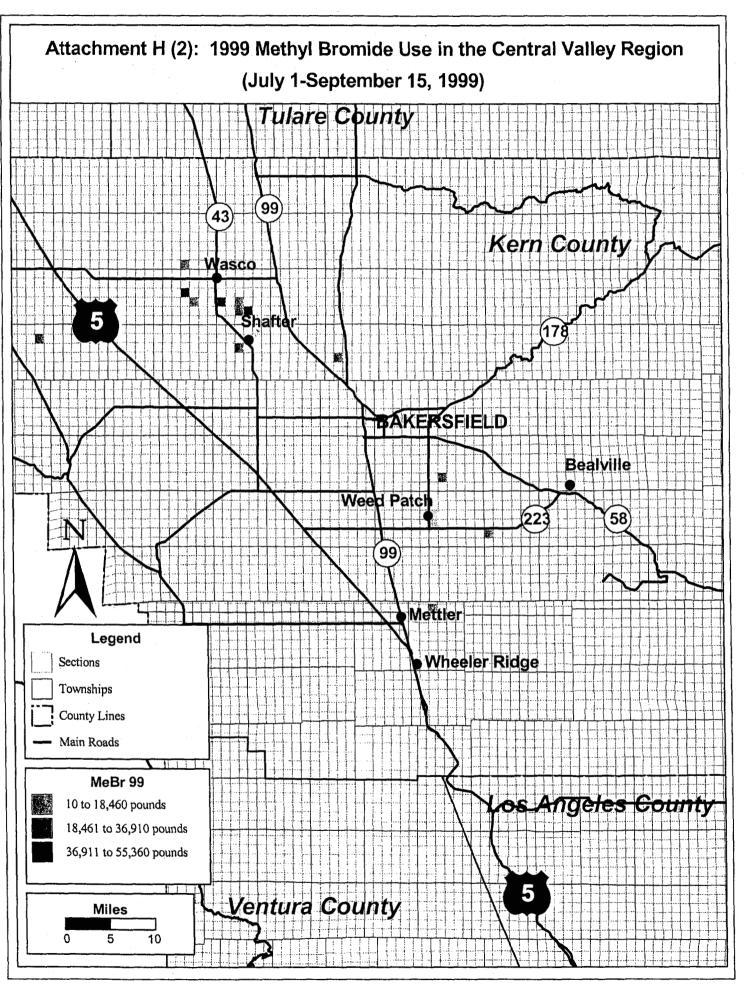
According to the product labels for methyl bromide, it is an extremely hazardous liquid and vapor under pressure. Inhalation may be fatal or cause serious acute illness or delayed lung or nervous system injury. Liquid or vapor may cause skin or eye injury. Methyl bromide vapor is odorless and non-irritating to skin and eyes during exposure and toxic levels may occur without warning or detection.

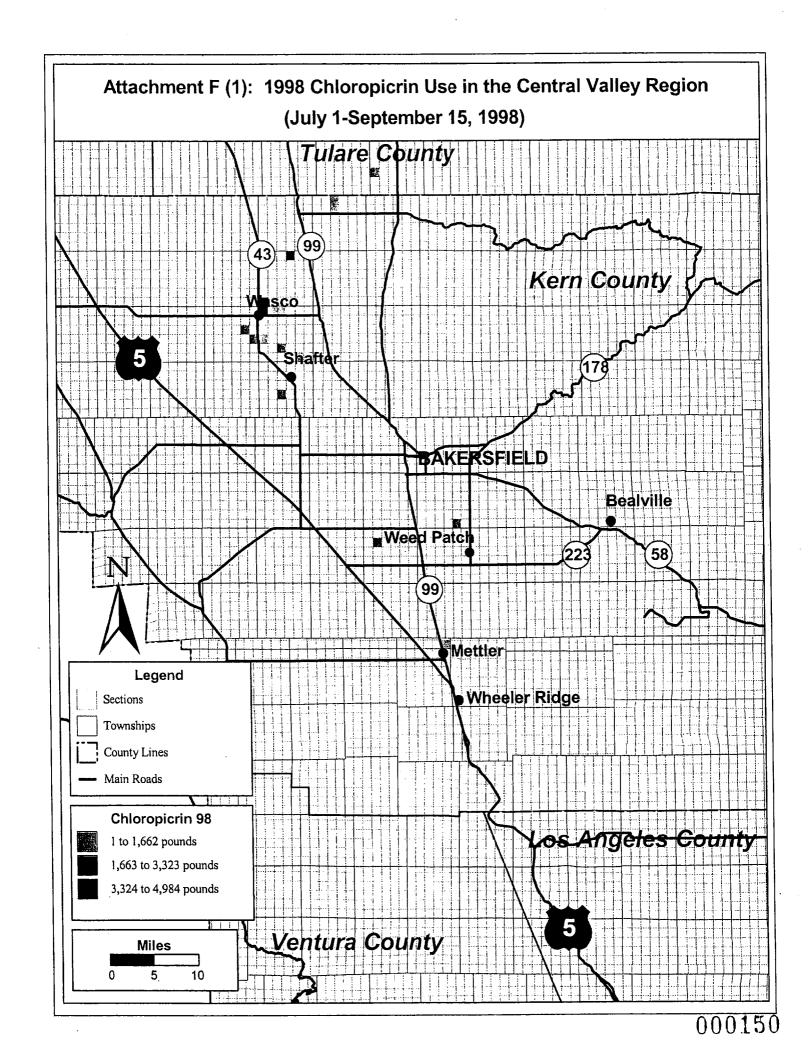
The acceptable air concentration for persons exposed to methyl bromide is 5 ppm, except for those in residential or commercial structures. A respirator is required if air concentrations exceed 5 ppm at any time. According to the label, proper protective equipment for applicators include loose fitting or well-ventilated long-sleeved shirt and long pants, shoes and socks, full-face shield or safety glasses with brow and temple shields. Monitoring personnel should refer to the label of the actual product used for further precautions. Methyl bromide concentrations at the buffer zone distance should not exceed 1 ppm at any time.

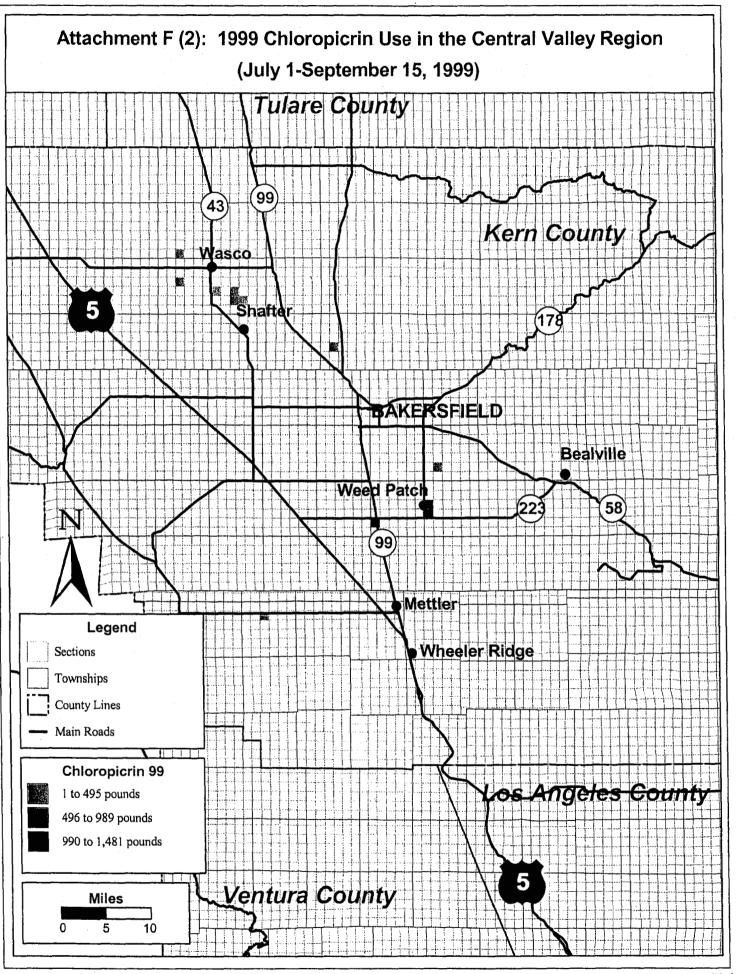
E. REFERENCES

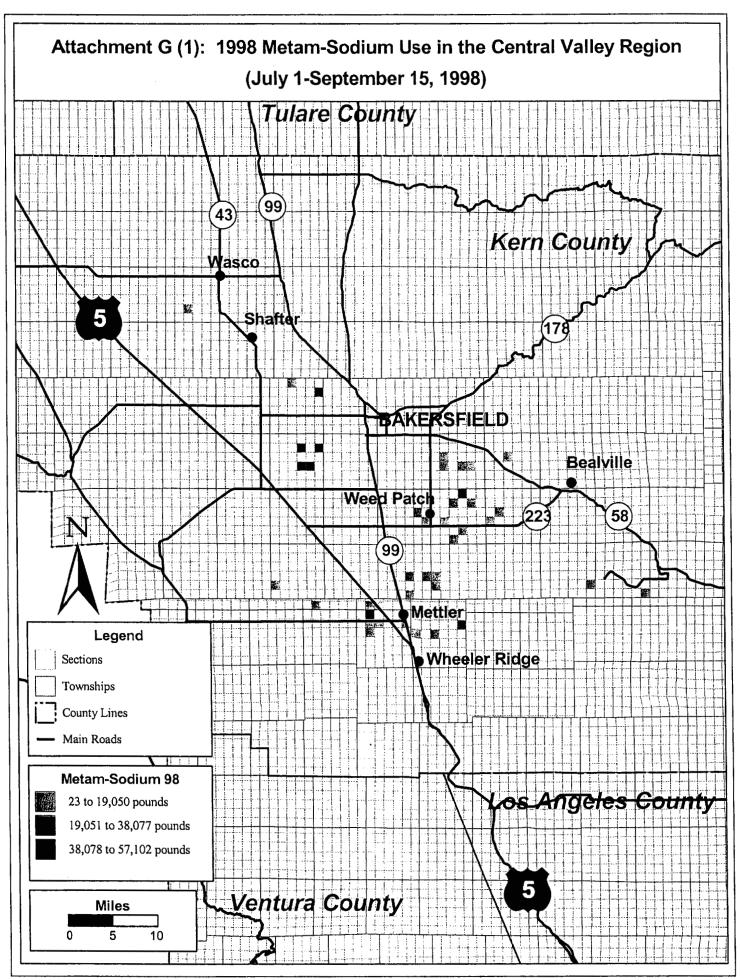
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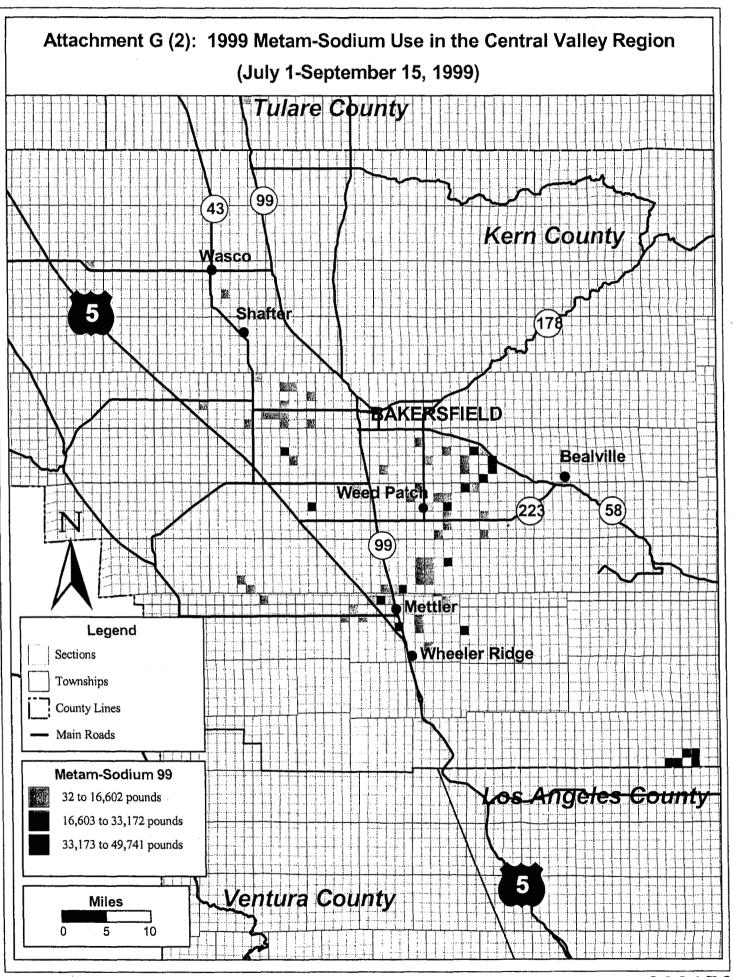


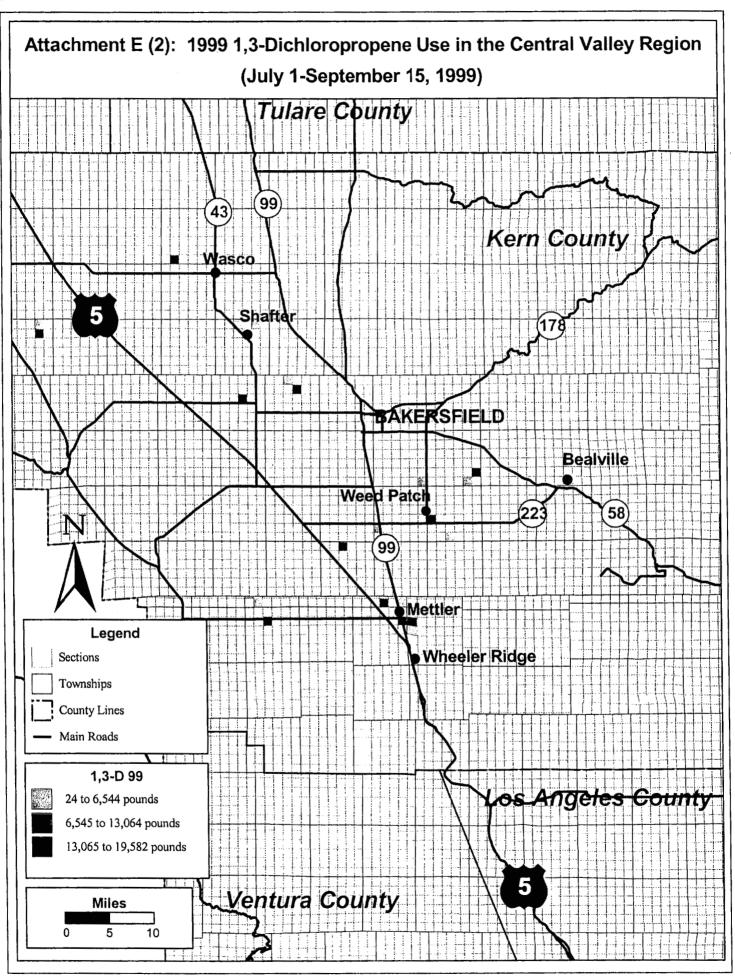


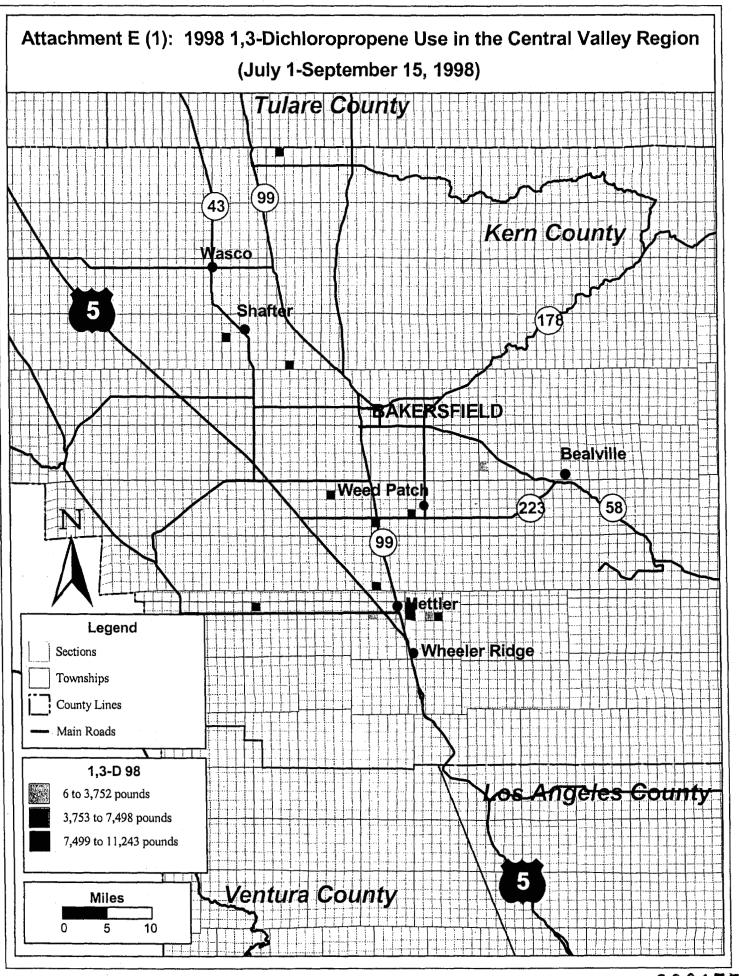


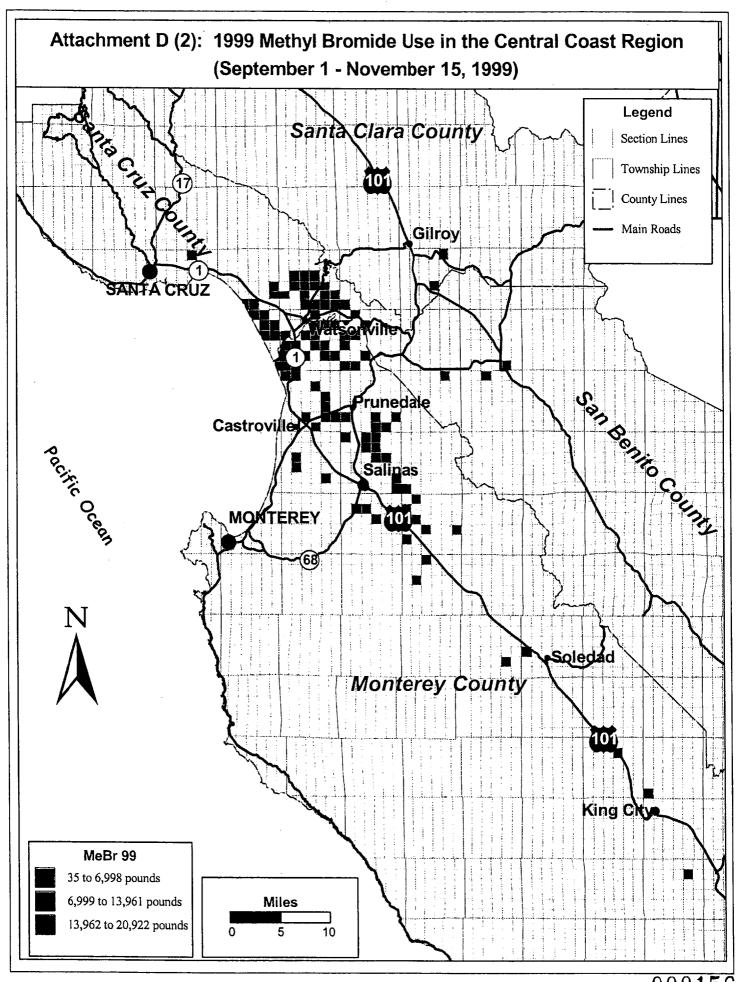


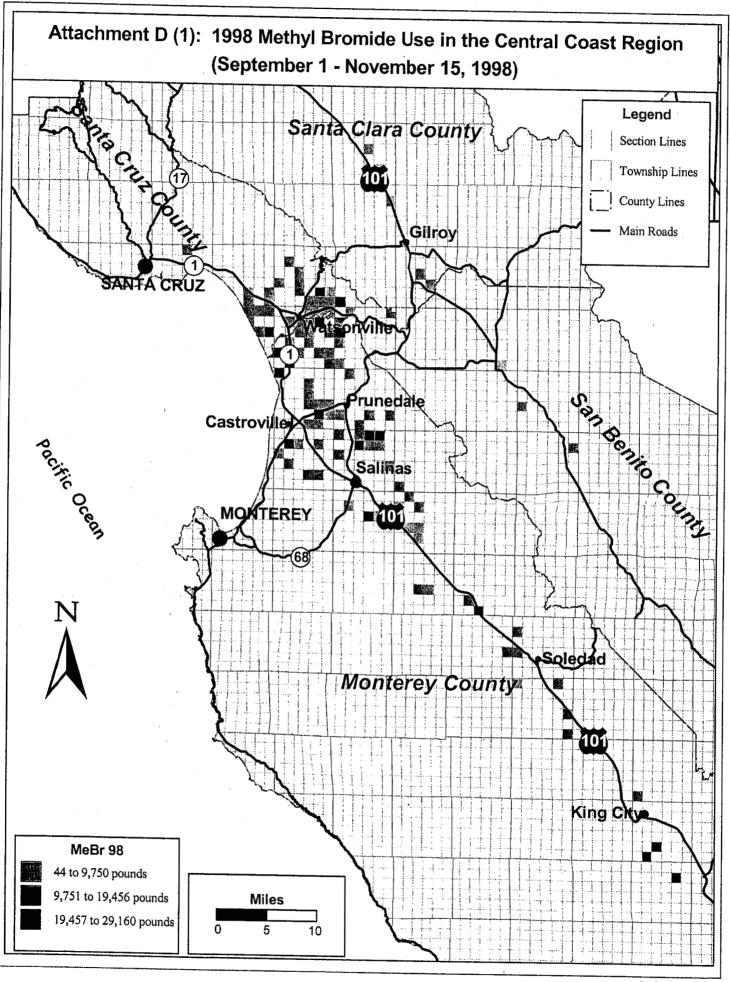


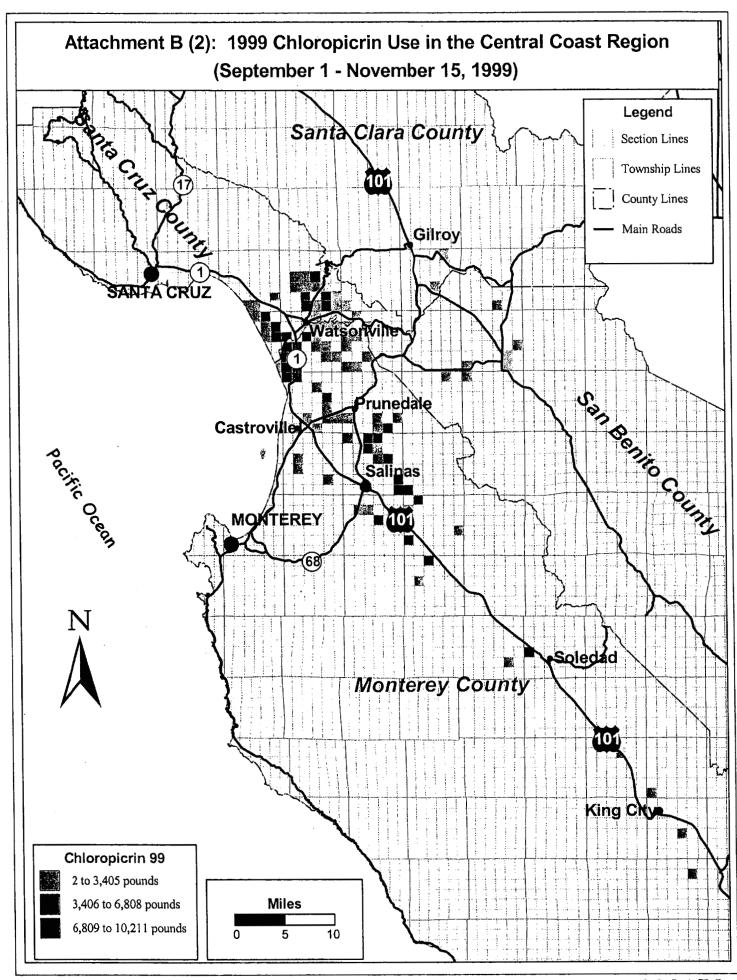


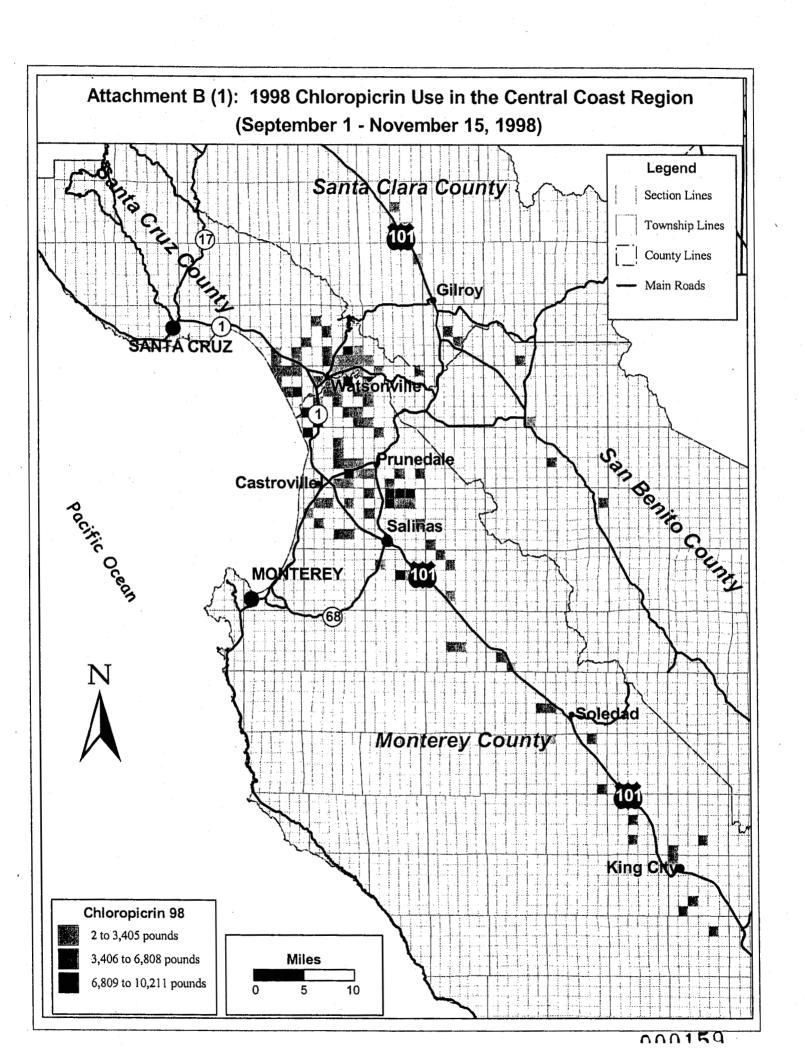


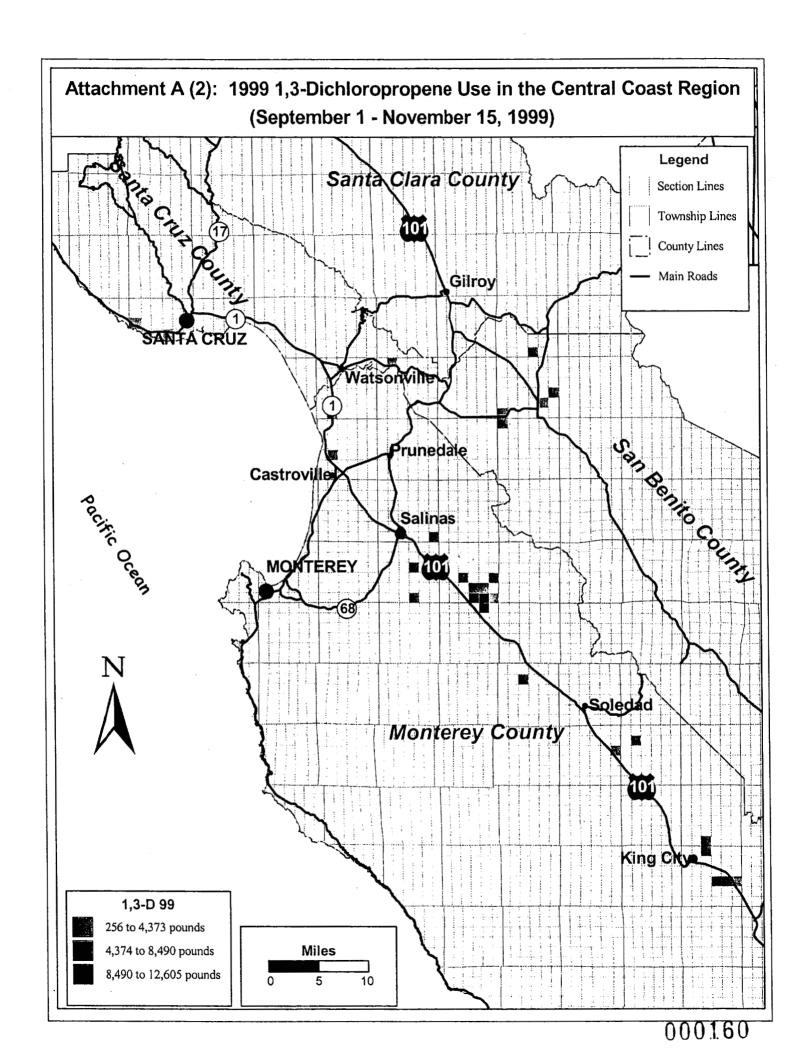


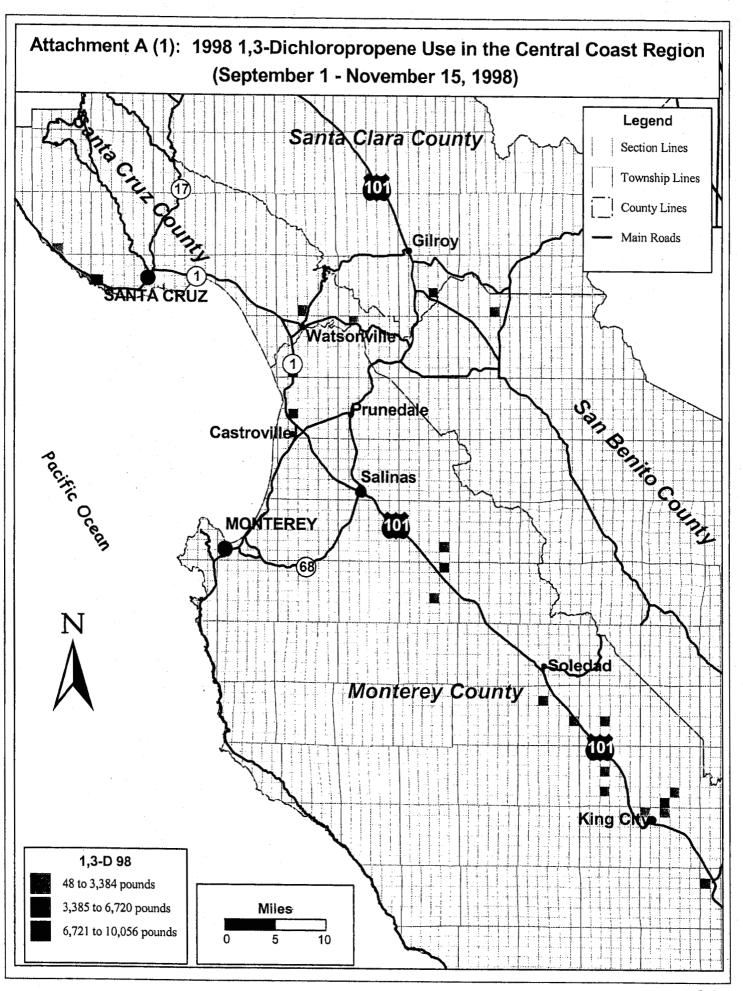


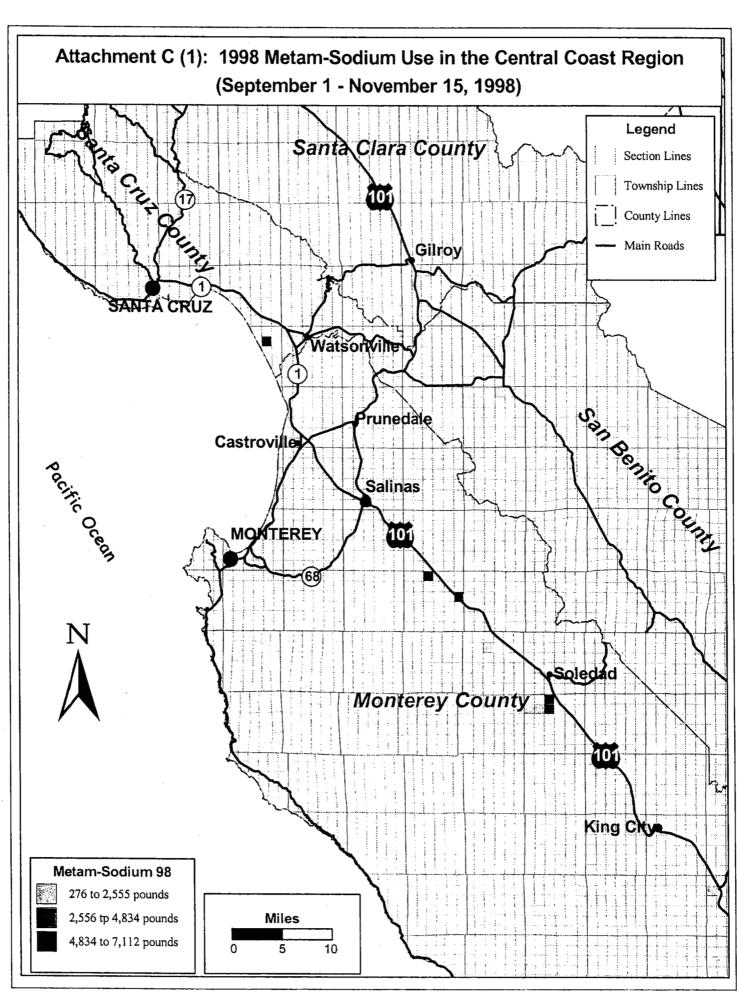


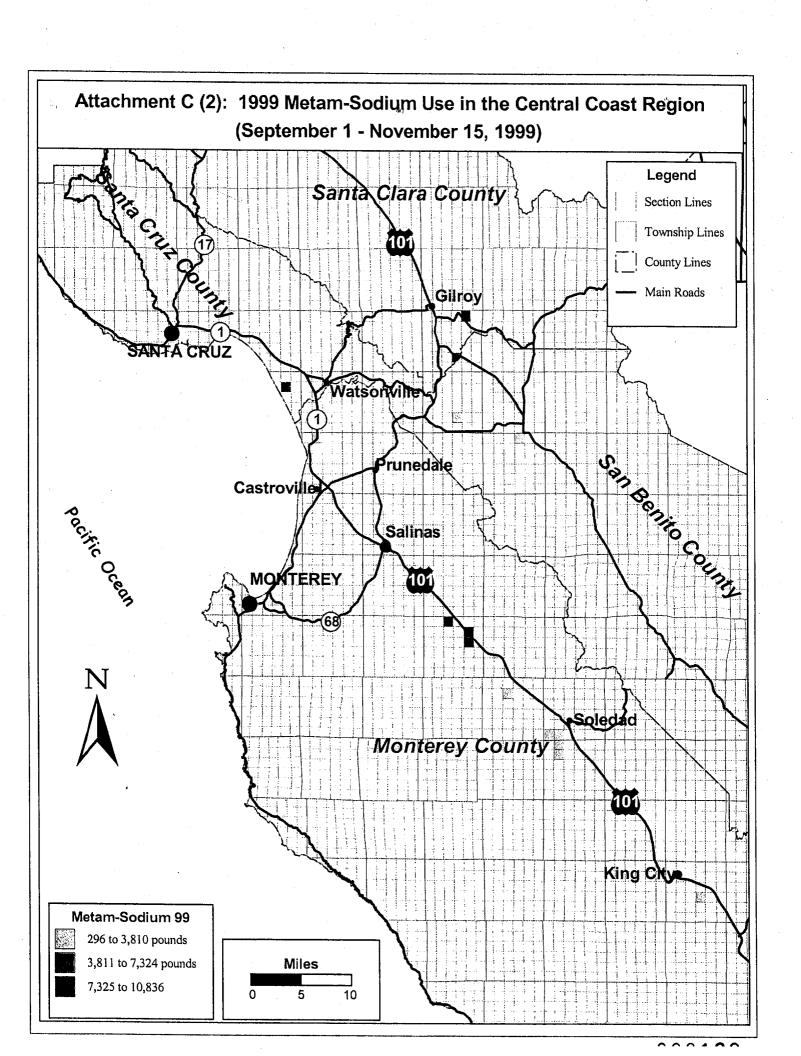












APPENDIX VIII

1,3-Dichloropropene Cartridge Results in Monterey and Santa Cruz Counties – Fall 2001

1,3-Dichloropropene Cartridge Results in Monterey and Santa Cruz Counties – Fall 2001

1. Summary

At the request of the California Department of Pesticide Regulation (DPR), the Air Resources Board (ARB) staff determined the airborne concentration of 1,3-dichloropropene in Monterey and Santa Cruz Counties from September 8 through November 8, 2001. The monitoring was conducted using two sampling media: SilcoCan canister and coconut based charcoal cartridge. The canister results should be considered as the "official" results for the monitoring study and have reported separately. The cartridge results reported in this Appendix are reported for comparison with the canister results.

2. 1,3-Dichloropropene Cartridge Results

The 1,3-dichloropropene results were reported separately for the cis and trans isomers and also as total (cis + trans) 1,3-dichloropropene. Only values equal to or greater than the EQL for the cis and trans isomers were used to calculate the total 1,3-dichloropropene. Table 1 presents the results of ambient air monitoring for 1,3-dichloropropene in units of ng/m³ and pptv. Summaries of the ambient results for total 1,3-dichloropropene are presented in Table 2 and bar graphs (page 2 through 4). The monitoring period included 192 individual sampling periods (6 sites x 32 sampling days).

The equation used to convert 1,3-dichloropropene (total) air concentration results from units of ng/m³ to units of pptv at 1 atmosphere and 25°C is shown below:

pptv =
$$(ng/m^3) \times (0.0820575 \text{ liter-atm/mole-}^{\circ}\text{K})(298^{\circ}\text{K}) = (0.2203) \times (ng/m^3)$$

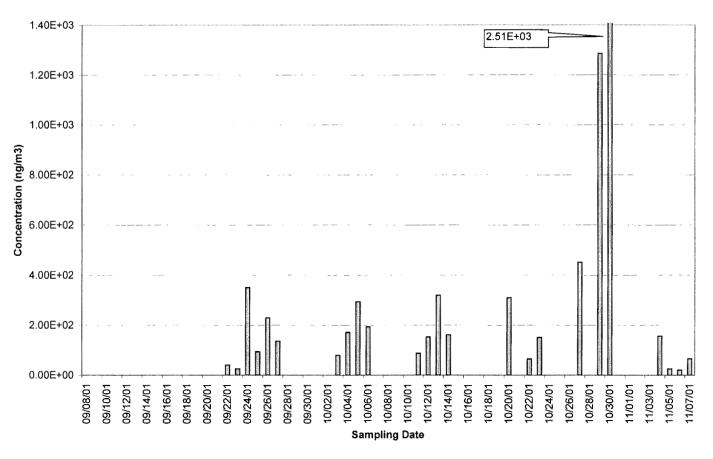
(1 atm)(111.0 gram/mole)

Daily concentrations of 1,3-dichloropropene (total) ranged from <MDL to as high as 7,500 ng/m³ (1700 pptv). The highest concentration was measured at the MacQuiddy Elementary School site in Watsonville.

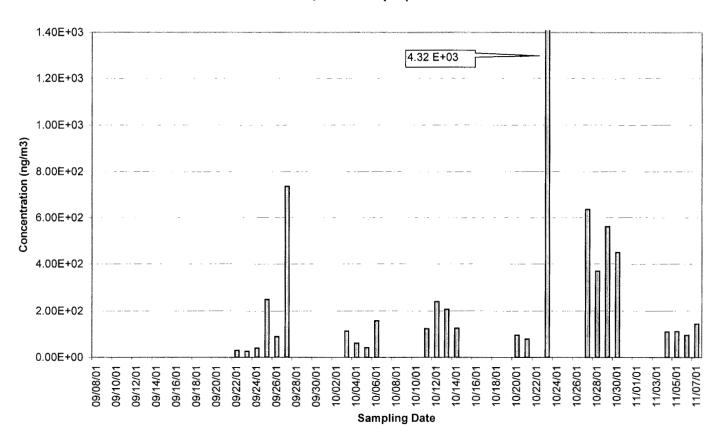
Eight-week average concentrations ranged from 171 ng/m³ (38 pptv) to 940 ng/m³ (210 pptv). The highest average was also measured at the MacQuiddy Elementary School site.

Of the 192 ambient samples collected (spikes, blanks, and the lower value of each collocated pair excluded), 160 were found to be above the EQL of 4.3 ng/m3, 13 were found to have detectable results (Det), 16 were below MDL and three samples were invalid.

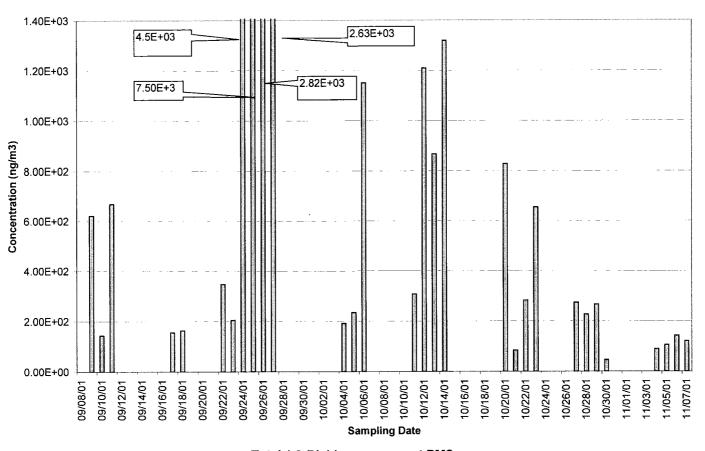
Total 1,3-Dichloropropene at CHU



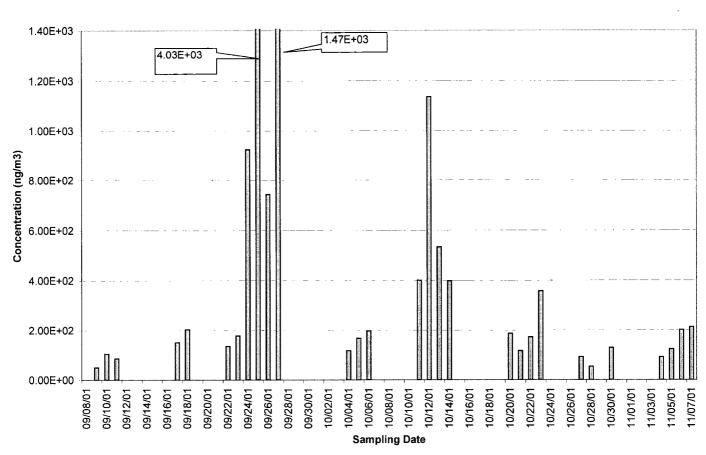
Total 1,3-Dichloropropene at LJE



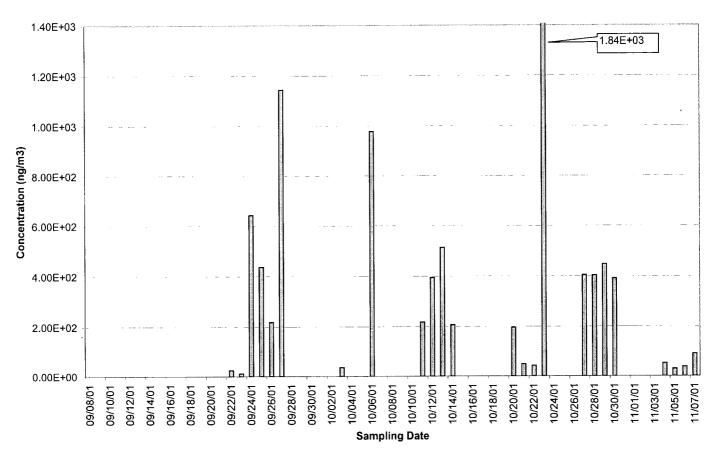
Total 1,3-Dichloropropene at MES



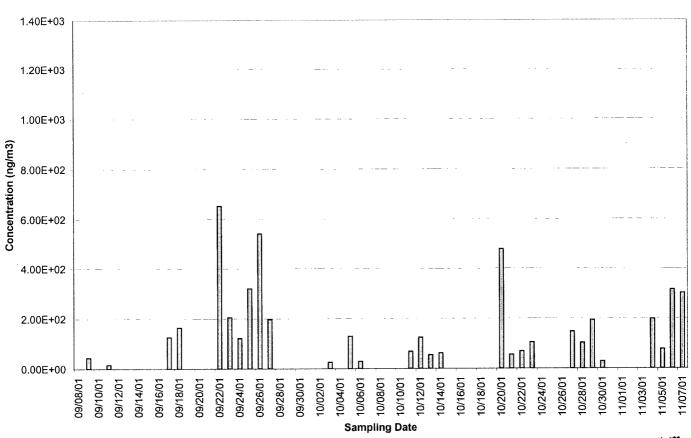
Total 1,3-Dichloropropene at PMS



Total 1,3-Dichloropropene at SAL



Total 1,3-Dichloropropene at SES



167

Table 1 1,3-Dichloropropene Ambient Monitoring Results (Cartridge) for Monterey and Santa Cruz Counties 2001

Log		Start	End	Time	Time	Volume	cis-1,3-DCP	trans-1,3-DCP	Total 1,	3-Dichloropr	opene
#	Sample ID	Date/Time	Date/Time	(min)	(hours)	(m³)	(ng/sample)	(ng/sample)	(ng/sample)	(ng/m³)	⁽¹⁾ (pptv)
1	SALT-1	9/8/01 6:45 AM	9/9/01 6:46 AM	1441	24.0	3.60	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
2	SALT-1FS	9/8/01 6:53 AM	9/9/01 6:58 AM	1445	24.1	3.61	7.13E+01	9.11E+01	1.62E+02	4.5E+01	9.9E+00
3	CHUT-1	9/8/01 7:28 AM	9/9/01 7:38 AM	1450	24.2	3.63	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
4	LJET-1	9/8/01 8:11 AM	9/9/01 8:23 AM	1452	24.2	3.63	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
5	PMST-1	9/8/01 8:59 AM	9/9/01 9:13 AM	1454	24.2	3.64	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
6	MEST-1	9/8/01 9:37 AM	9/9/01 9:56 AM	1459	24.3	3.65	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
7	SEST-1	9/8/01 10:10 AM	9/9/01 10:33 AM	1463	24.4	3.66	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
8	SALT-1-TB	9/9/01 7:09 AM	NA	NA	NA	NA	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td>NA</td><td>NA</td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td>NA</td><td>NA</td></mdl<></td></mdl<>	<mdl< td=""><td>NA</td><td>NA</td></mdl<>	NA	NA
9	SALT-2	9/9/01 6:51 AM	9/10/01 6:36 AM	1425	23.8	3.99	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
10	SALT-2C	9/9/01 7:02 AM	9/10/01 6:52 AM	1430	23.8	3.57	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
11	CHUT-2	9/9/01 7:44 AM	9/10/01 7:52 AM	1448	24.1	3.62	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
12	CHUT-2C	9/9/01 7:53 AM	9/10/01 7:44 AM	1431	23.9	3.58	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
13	LJET-2	9/9/01 8:30 AM	9/10/01 8:33 AM	1443	24.0	3.61	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
14	LJET-2C	9/9/01 8:37 AM	9/10/01 8:40 AM	1443	24.0	3.61	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
15	PMST-2	9/9/01 9:19 AM	9/10/01 9:34 AM	1455	24.2	3.64	9.24E+01	8.75E+01	1.80E+02	4.9E+01	1.1E+01
16	PMST-2C	9/9/01 9:26 AM	9/10/01 9:39 AM	1453	24.2	3.63	3.24E+02	3.03E+02	6.27E+02	1.7E+02	3.8E+01
17	MEST-2	9/9/01 10:02 AM	9/10/01 10:08 AM	1446	24.1	3.61	1.20E+03	1.04E+03	2.24E+03	6.2E+02	1.4E+02
18	MEST-2C	9/9/01 10:08 AM	9/10/01 10:17 AM	1449	24.1	3.98	1.00E+03	8.88E+02	1.89E+03	4.7E+02	1.0E+02
19	SEST-2	9/9/01 10:39 AM	9/10/01 10:53 AM	1454	24.2	3.64	8.93E+01	7.19E+01	1.61E+02	4.4E+01	9.8E+00
20	SEST-2C	9/9/01 10:45 AM	9/10/01 10:58 AM	1453	24.2	3.63	7.37E+01	5.99E+01	1.34E+02	3.7E+01	8.1E+00
21	SEST-1TS	9/9/01 10:58 AM	NA	NA	NA	NA	7.54E+01	7.87E+01	1.54E+02	NA	NA
22	SALT-3	9/10/01 6:44 AM	9/11/01 6:37 AM	1433	23.9	3.58	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
23	CHUT-3	9/10/01 7:46 AM	9/11/01 7:27 AM	1421	23.7	3.55	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
24	LJET-3	9/10/01 8:36 AM	9/11/01 8:21 AM	1425	23.8	2.64	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
25	PMST-3	9/10/01 9:36 AM	9/11/01 9:29 AM	1433	23.9	3.58	2.01E+02	1.73E+02	3.74E+02	1.0E+02	2.3E+01
26	MEST-3	9/10/01 10:14 AM	9/11/01 10:12 AM	1438	24.0	3.60	2.81E+02	2.36E+02	5.17E+02	1.4E+02	3.2E+01
27	SEST-3	9/10/01 10:56 AM	9/11/01 10:56 AM	1440	24.0	3.60	DET	DET	DET	DET	DET
28	SALT-4	9/11/01 6:45 AM	9/12/01 6:43 AM	1438	24.0	3.60	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
29	CHUT-4	9/11/01 7:34 AM	9/12/01 7:29 AM	1435	23.9	3.59	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
30	LJET-4	9/11/01 8:29 AM	9/12/01 8:25 AM	1436	23.9	3.59	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
31	PMST-4	9/11/01 9:30 AM	9/12/01 9:12 AM	1422	23.7	3.55	1.66E+02	1.40E+02	3.06E+02	8.6E+01	1.9E+01
32	MEST-4	9/11/01 10:20 AM	9/12/01 9:50 AM	1410	23.5	3.52	1.33E+03	1.03E+03	2.36E+03	6.7E+02	1.5E+02
33	SEST-4	9/11/01 11:05 AM	9/12/01 10:31 AM	1406	23.4	3.52	3.52E+01	2.05E+01	5.57E+01	1.6E+01	3.5E+00
34	SALT-5	9/17/01 6:47 AM	9/18/01 6:25 AM	1418	23.6	3.55	DET	DET	DET	DET	DET
35	CHUT-5**	9/17/01 7:28 AM	9/18/01 7:10 AM	1422	23.7	3.55	DET	DET	DET	DET	DET
36	LJET-5	9/17/01 8:12 AM	9/18/01 10:16 AM	1564	26.1	3.91	DET	DET	DET	DET	DET
37	PMST-5	9/17/01 9:00 AM	9/18/01 11:03 AM	1563	26.1	3.91	3.30E+02	2.58E+02	5.89E+02	1.5E+02	3.3E+01

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^{• =} sample loss on extraction

** = cartridge wet

Table 1 1,3-Dichloropropene Ambient Monitoring Results (Cartridge) for Monterey and Santa Cruz Counties 2001

Log		Start	End	Time	Time	Volume	cis-1,3-DCP	trans-1,3-DCP	Total 1,3	3-Dichloropro	pene
#	Sample ID	Date/Time	Date/Time	(min)	(hours)	(m³)	(ng/sample)	(ng/sample)	(ng/sample)	(ng/m³)	⁽¹⁾ (pptv)
38	MEST-5	9/17/01 9:25 AM	9/18/01 11:37 AM	1572	26.2	3.93	3.46E+02	2.69E+02	6.15E+02	1.6E+02	3.4E+01
39	SEST-5	9/17/01 9:47 AM	9/18/01 12:10 PM	1583	26.4	3.96	2.77E+02	2.24E+02	5.01E+02	1.3E+02	2.8E+01
40	SALT-5TB	9/18/01 7:28 AM	NA	NA	NA	NA	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td>NA</td><td>NA</td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td>NA</td><td>NA</td></mdl<></td></mdl<>	<mdl< td=""><td>NA</td><td>NA</td></mdl<>	NA	NA
41	SALT-6	9/18/01 6:31 AM	9/19/01 7:26 AM	1495	24.9	3.74	DET	DET	DET	DET	DET
42	SALT-6C	9/18/01 6:38 AM	9/19/01 7:33 AM	1495	24.9	3.74	DET	DET	DET	DET	DET
43	CHUT-6	9/18/01 7:18 AM	9/19/01 8:01 AM	1483	24.7	3.71	DET	DET	DET	DET	DET
44	CHUT-6C	9/18/01 8:25 AM	9/19/01 8:08 AM	1423	23.7	3.56	DET	DET	DET	DET	DET
45	LJET-6	9/18/01 10:25 AM	9/19/01 9:31 AM	1386	23.1	3.46	DET	DET	DET	DET	DET
46	LJET-6C	9/18/01 10:29 AM	9/19/01 9:36 AM	1387	23.1	3.47	DET	DET	DET	DET	DET
47	PMST-6	9/18/01 11:11 AM	9/19/01 10:16 AM	1385	23.1	3.46	3.87E+02	3.18E+02	7.05E+02	2.0E+02	4.5E+01
48	PMST-6C	9/18/01 11:13 AM	9/19/01 10:22 AM	1389	23.1	3.47	3.77E+02	3.10E+02	6.88E+02	2.0E+02	4.4E+01
49	MEST-6	9/18/01 11:43 AM	9/19/01 10:45 AM	1382	23.0	3.45	3.08E+02	2.59E+02	5.66E+02	1.6E+02	3.6E+01
50	MEST-6C	9/18/01 11:45 AM	9/19/01 10:48 AM	1383	23.0	3.46	3.03E+02	2.49E+02	5.53E+02	1.6E+02	3.5E+01
51	SEST-6	9/18/01 12:19 PM	9/19/01 11:27 AM	1388	23.1	3.47	4.94E+02	3.72E+02	8.66E+02	2.5E+02	5.5E+01
52	SEST-6C*	9/18/01 12:25 PM	9/19/01 11:27 AM	1382	23.0	3.45	3.68E+02	2.89E+02	6.57E+02	1.9E+02	4.2E+01
53	SALT-7	9/22/01 6:48 AM	9/23/01 6:43 AM	1435	23.9	3.59	5.01E+01	3.87E+01	8.87E+01	2.5E+01	5.4E+00
54	CHUT-7	9/22/01 7:31 AM	9/23/01 7:39 AM	1448	24.1	3.62	6.83E+01	7.97E+01	1.48E+02	4.1E+01	9.0E+00
55	LJET-7	9/22/01 8:20 AM	9/23/01 8:40 AM	1460	24.3	3.65	6.39E+01	4.62E+01	1.10E+02	3.0E+01	6.6E+00
56	PMST-7	9/22/01 9:22 AM	9/23/01 9:33 AM	1451	24.2	3.63	2.67E+02	2.26E+02	4.94E+02	1.4E+02	3.0E+01
57	MEST-7	9/22/01 10:30 AM	9/23/01 10:23 AM	1433	23.9	3.58	7.14E+02	5.29E+02	1.24E+03	3.5E+02	7.6E+01
58	SEST-7	9/22/01 11:03 AM	9/23/01 11:05 AM	1442	24.0	3.60	1.42E+03	9.40E+02	2.36E+03	6.5E+02	1.4E+02
59	SALT-8	9/23/01 6:49 AM	9/24/01 6:47 AM	1438	24.0	3.59	2.32E+01	2.07E+01	4.39E+01	1.2E+01	2.7E+00
60	CHUT-8	9/23/01 7:49 AM	9/24/01 7:44 AM	1435	23.9	3.59	4.18E+01	5.03E+01	9.21E+01	2.6E+01	5.7E+00
61	LJET-8	9/23/01 8:46 AM	9/24/01 8:44 AM	1438	24.0	3.60	5.27E+01	4.20E+01	9.46E+01	2.6E+01	5.8E+00
62	PMST-8	9/23/01 9:39 AM	9/24/01 9:47 AM	1448	24.1	3.62	3.55E+02	2.90E+02	6.44E+02	1.8E+02	3.9E+01
63	MEST-8	9/23/01 10:29 AM	9/24/01 10:31 AM	1442	24.0	3.61	4.20E+02	3.19E+02	7.39E+02	2.1E+02	4.5E+01
64	SEST-8	9/23/01 11:12 AM	9/24/01 11:15 AM	1443	24.0	3.61	4.20E+02	3.18E+02	7.38E+02	2.0E+02	4.5E+01
65	SALT-9	9/24/01 6:53 AM	9/25/01 6:58 AM	1445	24.1	3.61	1.41E+03	9.11E+02	2.32E+03	6.4E+02	1.4E+02
66	CHUT-9	9/24/01 7:52 AM	9/25/01 7:53 AM	1441	24.0	3.60	7.63E+02	5.00E+02	1.26E+03	3.5E+02	7.7E+01
67	LJET-9	9/24/01 8:52 AM	9/25/01 9:11 AM	1459	24.3	3.65	8.13E+01	6.51E+01	1.46E+02	4.0E+01	8.8E+00
68	PMST-9	9/24/01 9:54 AM	9/25/01 10:03 AM	1449	24.1	3.62	1.94E+03	1.41E+03	3.35E+03	9.2E+02	2.0E+02
69	MEST-9	9/24/01 10:38 AM	9/25/01 10:55 AM	1457	24.3	3.64	9.85E+03	6.82E+03	1.67E+04	4.6E+03	1.0E+03
70	SEST-9	9/24/01 11:22 AM	9/25/01 11:29 AM	1447	24.1	3.62	2.45E+02	1.95E+02	4.40E+02	1.2E+02	2.7E+01
71	SALT-10	9/25/01 7:09 AM	9/26/01 6:41 AM	1412	23.5	3.53	8.79E+02	6.66E+02	1.54E+03	4.4E+02	9.6E+01
72	SALT-10FS	9/25/01 7:14 AM	9/26/01 6:49 AM	1415	23.6	3.54	9.78E+02	8.13E+02	1.79E+03	5.1E+02	1.1E+02
73	SALT-10TS	9/25/01 6:12 AM	NA	NA	NA	NA	1.01E+02	1.02E+02	2.03E+02	NA	NA
74	SALT-10TB	9/26/01 6:12 AM	NA	NA	NA	NA	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td>NA</td><td>NA</td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td>NA</td><td>NA</td></mdl<></td></mdl<>	<mdl< td=""><td>NA</td><td>NA</td></mdl<>	NA	NA

* = sample loss on extraction

** = cartridge wet

INVALID - invalid due to unstable flow rate

Table 1 1,3-Dichloropropene Ambient Monitoring Results (Cartridge) for Monterey and Santa Cruz Counties 2001

Log		Start	End	Time	Time	Volume	cis-1,3-DCP	trans-1,3-DCP	Total 1,3	3-Dichloropro	pene
#	Sample ID	Date/Time	Date/Time	(min)	(hours)	(m³)	(ng/sample)	(ng/sample)	(ng/sample)	(ng/m³)	⁽¹⁾ (pptv)
75	CHUT-10	9/25/01 7:59 AM	9/26/01 7:47 AM	1428	23.8	3.57	1.93E+02	1.41E+02	3.34E+02	9.4E+01	2.1E+01
76	LJET-10	9/25/01 9:17 AM	9/26/01 8:40 AM	1403	23.4	3.51	4.97E+02	3.80E+02	8.77E+02	2.5E+02	5.5E+01
77	PMST-10	9/25/01 10:11 AM	9/26/01 9:46 AM	1415	23.6	3.54	8.24E+03	6.03E+03	1.43E+04	4.0E+03	8.9E+02
78	MEST-10	9/25/01 11:02 AM	9/26/01 10:26 AM	1404	23.4	3.51	1.55E+04	1.08E+04	2.63E+04	7.5E+03	1.7E+03
79	SEST-10	9/25/01 11:37 AM	9/26/01 11:20 AM	1423	23.7	3.56	6.59E+02	4.84E+02	1.14E+03	3.2E+02	7.1E+01
80	SALT-11	9/26/01 6:59 AM	9/27/01 6:38 AM	1419	23.6	3.55	3.86E+02	3.89E+02	7.74E+02	2.2E+02	4.8E+01
81	SALT-11C	9/26/01 7:04 AM	9/27/01 6:45 AM	1421	23.7	3.55	3.45E+02	3.46E+02	6.91E+02	1.9E+02	4.3E+01
82	CHUT-11	9/26/01 8:01 AM	9/27/01 7:34 AM	1413	23.6	3.53	5.00E+02	3.08E+02	8.08E+02	2.3E+02	5.0E+01
83	CHUT-11C	9/26/01 7:58 AM	9/27/01 7:27 AM	1409	23.5	3.52	4.05E+02	2.31E+02	6.36E+02	1.8E+02	4.0E+01
84	LJET-11	9/26/01 8:45 AM	9/27/01 8:13 AM	1408	23.5	3.52	1.56E+02	1.62E+02	3.18E+02	9.0E+01	2.0E+01
85	LJET-11C	9/26/01 8:49 AM	9/27/01 8:18 AM	1409	23.5	3.52	1.55E+02	1.63E+02	3.18E+02	9.0E+01	2.0E+01
86	PMST-11	9/26/01 9:52 AM	9/27/01 9:02 AM	1390	23.2	3.47	1.41E+03	1.17E+03	2.58E+03	7.4E+02	1.6E+02
87	PMST-11C	9/26/01 9:56 AM	9/27/01 9:08 AM	1392	23.2	3.48	1.34E+03	1.08E+03	2.42E+03	6.9E+02	1.5E+02
88	MEST-11	9/26/01 10:38 AM	9/27/01 9:45 AM	1387	23.1	3.47	3.22E+03	2.42E+03	5.64E+03	1.6E+03	3.6E+02
89	MEST-11C	9/26/01 10:46 AM	9/27/01 9:53 AM	1387	23.1	3.47	5.66E+03	4.13E+03	9.80E+03	2.8E+03	6.2E+02
90	SEST-11	9/26/01 11:24 AM	9/27/01 10:32 AM	1388	23.1	3.47	1.05E+03	8.28E+02	1.88E+03	5.4E+02	1.2E+02
91	SEST-11C	9/26/01 11:28 AM	9/27/01 10:39 AM	1391	23.2	3.48	1.04E+03	8.27E+02	1.87E+03	5.4E+02	1.2E+02
92	SALT-12	9/27/01 6:50 AM	9/28/01 6:57 AM	1447	24.1	3.62	2.44E+03	1.70E+03	4.14E+03	1.1E+03	2.5E+02
93	CHUT-12	9/27/01 7:38 AM	9/28/01 7:31 AM	1433	23.9	3.58	2.89E+02	1.97E+02	4.86E+02	1.4E+02	3.0E+01
94	LJET-12	9/27/01 8:22 AM	9/28/01 8:10 AM	1428	23.8	3.57	1.58E+03	1.05E+03	2.63E+03	7.4E+02	1.6E+02
95	PMST-12	9/27/01 9:12 AM	9/28/01 8:50 AM	1418	23.6	3.55	2.91E+03	2.29E+03	5.20E+03	1.5E+03	3.2E+02
96	MEST-12	9/27/01 9:58 AM	9/28/01 9:23 AM	1405	23.4	3.51	5.32E+03	3.93E+03	9.24E+03	2.6E+03	5.8E+02
97	SEST-12	9/27/01 10:43 AM	9/28/01 9:49 AM	1386	23.1	3.47	3.89E+02	2.94E+02	6.83E+02	2.0E+02	4.3E+01
98	SALT-13	10/3/01 7:25 AM	10/4/01 7:27 AM	1442	24.0	3.60	6.90E+01	6.29E+01	1.32E+02	3.7E+01	8.1E+00
99	SALT-13TB	10/4/01 7:04 AM	NA	NA	NA	NA	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td>NA</td><td>NA</td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td>NA</td><td>NA</td></mdl<></td></mdl<>	<mdl< td=""><td>NA</td><td>NA</td></mdl<>	NA	NA
100	CHUT-13	10/3/01 8:17 AM	10/4/01 8:29 AM	1452	24.2	3.63	1.63E+02	1.27E+02	2.90E+02	8.0E+01	1.8E+01
101	LJET-13	10/3/01 9:07 AM	10/4/01 9:37 AM	1470	24.5	3.67	2.30E+02	1.90E+02	4.20E+02	1.1E+02	2.5E+01
102	PMST-13	10/3/01 10:01 AM	10/4/01 10:38 AM	1477	24.6	3.69	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
103	MEST-13	10/3/01 11:01 AM	10/4/01 11:40 AM	1479	24.7	3.70	2.27E+01	DET	DET	DET	DET
104	SEST-13	10/3/01 11:47 AM	10/4/01 12:38 PM	1491	24.8	3.73	2.90E+01	2.12E+01	5.02E+01	1.3E+01	3.0E+00
105	SALT-14	10/4/01 7:35 AM	10/5/01 6:40 AM	1385	23.1	3.46	<mdl< td=""><td>DET</td><td>DET</td><td>DET</td><td>DET</td></mdl<>	DET	DET	DET	DET
106	SALT-14C	10/4/01 7:41 AM	10/5/01 6:58 AM	1397	23.3	3.49	DET	DET	DET	DET	DET
107	CHUT-14	10/4/01 8:43 AM	10/5/01 7:50 AM	1387	23.1	3.47	3.20E+02	2.52E+02	5.71E+02	1.6E+02	3.6E+01
108	CHUT-14C	10/4/01 8:50 AM	10/5/01 7:59 AM	1389	23.2	3.47	3.31E+02	2.62E+02	5.94E+02	1.7E+02	3.8E+01
109	LJET-14	10/4/01 9:42 AM	10/5/01 8:59 AM	1397	23.3	3.49	1.11E+02	1.07E+02	2.18E+02	6.2E+01	1.4E+01
110	LJET-14C	10/4/01 9:46 AM	10/5/01 9:10 AM	1404	23.4	3.51	1.08E+02	1.06E+02	2.14E+02	6.1E+01	1.3E+01
111	PMST-14	10/4/01 10:45 AM	10/5/01 10:07 AM	1402	23.4	3.51	2.08E+02	1.79E+02	3.86E+02	1.1E+02	2.4E+01

MDL=3.0 ng/sample for each 1,3-dichloropropene isomer DET=Value was below the EQL of 15 ng/sample but \geq MDL ⁽¹⁾pptv at 1 atm and 25 $^{\circ}$ C



Table 1 1,3-Dichloropropene Ambient Monitoring Results (Cartridge) for Monterey and Santa Cruz Counties 2001

Log		Start	End	Time	Time	Volume	cis-1,3-DCP	trans-1,3-DCP	Total 1,3	-Dichloropro	opene
#	Sample ID	Date/Time	Date/Time	(min)	(hours)	(m³)	(ng/sample)	(ng/sample)	(ng/sample)	(ng/m³)	⁽¹⁾ (pptv)
112	PMST-14C	10/4/01 10:51 AM	10/5/01 10:17 AM	1406	23.4	3.52	2.22E+02	1.90E+02	4.11E+02	1.2E+02	2.6E+01
113	MEST-14	10/4/01 11:49 AM	10/5/01 11:17 AM	1408	23.5	3.52	3.53E+02	2.98E+02	6.50E+02	1.8E+02	4.1E+01
114	MEST-14C	10/4/01 11:56 AM	10/5/01 11:33 AM	1417	23.6	3.54	3.62E+02	3.18E+02	6.79E+02	1.9E+02	4.2E+01
115	SEST-14	10/4/01 12:45 PM	10/5/01 12:34 PM	1429	23.8	3.57	7.20E+01	6.66E+01	DET	DET	DET
116	SEST-14C	10/4/01 12:51 PM	10/5/01 12:44 PM	1433	23.9	3.58	7.37E+01	6.88E+01	DET	DET	DET
117	SALT-15	10/5/01 7:03 AM	10/6/01 7:46 AM	1483	24.7	3.71	DET	DET	DET	DET	DET
118	CHUT-15	10/5/01 8:06 AM	10/6/01 7:49 AM	1423	23.7	3.56	6.23E+02	4.20E+02	1.04E+03	2.9E+02	6.5E+01
119	LJET-15	10/5/01 9:14 AM	10/6/01 8:41 AM	1407	23.4	3.52	7.43E+01	7.69E+01	1.51E+02	4.3E+01	9.5E+00
120	PMST-15	10/5/01 10:24 AM	10/6/01 9:46 AM	1402	23.4	3.51	2.97E+02	2.89E+02	5.86E+02	1.7E+02	3.7E+01
121	MEST-15	10/5/01 11:42 AM	10/6/01 10:46 AM	1384	23.1	3.46	4.30E+02	3.79E+02	8.09E+02	2.3E+02	5.2E+01
122	SEST-15	10/5/01 12:57 PM	10/6/01 11:59 AM	1382	23.0	3.45	2.40E+02	2.08E+02	4.48E+02	1.3E+02	2.9E+01
123	SALT-16	10/6/01 6:52 AM	10/7/01 6:44 AM	1432	23.9	3.58	1.68E+03	1.82E+03	3.50E+03	9.8E+02	2.2E+02
124	CHUT-16	10/6/01 7:55 AM	10/7/01 7:39 AM	1424	23.7	3.56	3.68E+02	3.20E+02	6.87E+02	1.9E+02	4.3E+01
125	LJET-16	10/6/01 8:47 AM	10/7/01 8:30 AM	1423	23.7	3.56	2.71E+02	2.93E+02	5.64E+02	1.6E+02	3.5E+01
126	PMST-16	10/6/01 9:52 AM	10/7/01 9:34 AM	1422	23.7	3.55	3.64E+02	3.37E+02	7.01E+02	2.0E+02	4.3E+01
127	MEST-16	10/6/01 10:54 AM	10/7/01 10:22 AM	1408	23.5	3.52	2.20E+03	1.85E+03	4.05E+03	1.2E+03	2.5E+02
128	SEST-16	10/6/01 12:06 PM	10/7/01 11:30 AM	1404	23.4	3.51	5.01E+01	5.28E+01	1.03E+02	2.9E+01	6.5E+00
129	SALT-17	10/11/01 7:03 AM	10/12/01 6:48 AM	1425	23.8	3.56	3.78E+02	3.99E+02	7.77E+02	2.2E+02	4.8E+01
130	SALT-17TS	10/12/01 6:50 AM	NA	NA	NA	NA	9.10E+01	9.10E+01	1.82E+02	NA	NA
131	SALT-17TB	10/12/01 6:52 AM	NA	NA	NA	NA	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td>NA</td><td>NA</td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td>NA</td><td>NA</td></mdl<></td></mdl<>	<mdl< td=""><td>NA</td><td>NA</td></mdl<>	NA	NA
132	SALT-17FS	10/11/01 7:09 AM	10/12/01 7:07 AM	NA	NA	NA	4.66E+02	4.79E+02	9.45E+02	NA	NA
133	CHUT-17	10/11/01 8:05 AM	10/12/01 8:15 AM	1450	24.2	3.63	1.52E+02	1.68E+02	3.21E+02	8.8E+01	1.9E+01
134	LJET-17	10/11/01 9:05 AM	10/12/01 9:19 AM	1454	24.2	3.64	2.18E+02	2.35E+02	4.53E+02	1.2E+02	2.7E+01
135	PMST-17	10/11/01 10:00 AM	10/12/01 10:26 AM	1466	24.4	3.67	7.78E+02	6.90E+02	1.47E+03	4.0E+02	8.8E+01
136	MEST-17	10/11/01 10:53 AM	10/12/01 11:09 AM	1456	24.3	3.64	5.81E+02	5.38E+02	1.12E+03	3.1E+02	6.8E+01
137	SEST-17	10/11/01 11:26 AM	10/12/01 11:51 AM	1465	24.4	3.66	1.38E+02	1.12E+02	2.50E+02	6.8E+01	1.5E+01
138	SALT-18	10/12/01 7:18 AM	10/13/01 6:42 AM	1404	23.4	3.51	6.38E+02	7.05E+02	1.34E+03	3.8E+02	8.4E+01
139	SALT-18C	10/12/01 7:25 AM	10/13/01 6:59 AM	1414	23.6	3.53	6.62E+02	7.34E+02	1.40E+03	3.9E+02	8.7E+01
140	CHUT-18	10/12/01 8:25 AM	10/13/01 8:03 AM	1418	23.6	3.55	2.49E+02	2.85E+02	DET	DET	DET
141	CHUT-18C	10/12/01 8:33 AM	10/13/01 8:14 AM	1421	23.7	3.55	2.52E+02	2.91E+02	5.43E+02	1.5E+02	3.4E+01
142	LJET-18	10/12/01 9:31 AM	10/13/01 9:12 AM	1421	23.7	3.55	4.08E+02	3.84E+02	7.92E+02	2.2E+02	4.9E+01
143	LJET-18C	10/12/01 9:36 AM	10/13/01 9:23 AM	1427	23.8	3.57	4.43E+02	4.16E+02	8.60E+02	2.4E+02	5.3E+01
144	PMST-18	10/12/01 10:31 AM	10/13/01 6:42 AM	1211	20.2	3.03	1.92E+03	1.52E+03	3.44E+03	1.1E+03	2.5E+02
145	PMST-18C	10/12/01 10:36 AM	10/13/01 10:30 AM	1434	23.9	3.59	1.82E+03	1.44E+03	3.26E+03	9.1E+02	2.0E+02
146	MEST-18	10/12/01 11:17 AM	10/13/01 6:42 AM	1165	19.4	2.91	1.96E+03	1.56E+03	3.52E+03	1.2E+03	2.7E+02
147	MEST-18C	10/12/01 11:21 AM	10/13/01 11:28 AM	1447	24.1	3.62	1.96E+03	1.56E+03	3.52E+03	9.7E+02	2.1E+02
148	SEST-18	10/12/01 12:11 PM	10/13/01 12:06 PM	1435	23.9	3.59	2.55E+02	1.91E+02	4.45E+02	1.2E+02	2.7E+01

* = sample loss on extraction

** = cartridge wet

INVALID - invalid due to unstable flow rate

Table 1 1,3-Dichloropropene Ambient Monitoring Results (Cartridge) for Monterey and Santa Cruz Counties 2001

Log		Start	End	Time	Time	Volume	cis-1,3-DCP	trans-1,3-DCP	Total 1,3	B-Dichloropr	opene
#	Sample ID	Date/Time	Date/Time	(min)	(hours)	(m³)	(ng/sample)	(ng/sample)	(ng/sample)	(ng/m³)	⁽¹⁾ (pptv)
149	SEST-18C	10/12/01 12:17 PM	10/13/01 12:18 PM	1441	24.0	3.60	2.19E+02	1.68E+02	3.87E+02	1.1E+02	2.4E+01
150	SALT-19	10/13/01 7:03 AM	10/14/01 7:01 AM	1438	24.0	3.60	9.50E+02	8.96E+02	1.85E+03	5.1E+02	1.1E+02
151	CHUT-19	10/13/01 8:18 AM	10/14/01 7:58 AM	1420	23.7	3.55	7.45E+02	3.87E+02	1.13E+03	3.2E+02	7.0E+01
152	LJET-19	10/13/01 9:26 AM	10/14/01 8:53 AM	1407	23.4	3.52	3.74E+02	3.56E+02	7.30E+02	2.1E+02	4.6E+01
153	PMST-19	10/13/01 10:32 AM	10/14/01 9:46 AM	1394	23.2	3.49	1.01E+03	8.55E+02	1.86E+03	5.3E+02	1.2E+02
154	MEST-19	10/13/01 10:13 AM	10/14/01 10:49 AM	1476	24.6	3.69	1.66E+03	1.55E+03	3.20E+03	8.7E+02	1.9E+02
155	SEST-19	10/13/01 12:20 PM	10/14/01 11:33 AM	1393	23.2	3.48	1.53E+02	1.38E+02	2.91E+02	8.4E+01	1.8E+01
156	SALT-20	10/14/01 7:04 AM	10/15/01 6:10 AM	1386	23.1	3.47	3.52E+02	3.67E+02	7.18E+02	2.1E+02	4.6E+01
157	CHUT-20	10/14/01 8:00 AM	10/15/01 7:00 AM	1380	23.0	3.45	3.42E+02	2.15E+02	5.57E+02	1.6E+02	3.6E+01
158	LJET-20	10/14/01 8:55 AM	10/15/01 7:55 AM	1380	23.0	3.45	2.15E+02	2.23E+02	4.38E+02	1.3E+02	2.8E+01
159	PMST-20	10/14/01 9:49 AM	10/15/01 8:49 AM	1380	23.0	3.45	7.11E+02	6.66E+02	1.38E+03	4.0E+02	8.8E+01
160	MEST-20	10/14/01 10:51 AM	10/15/01 9:51 AM	1380	23.0	3.45	2.22E+03	2.33E+03	4.55E+03	1.3E+03	2.9E+02
161	SEST-20	10/14/01 11:35 AM	10/15/01 10:35 AM	1380	23.0	3.45	1.14E+02	1.01E+02	2.15E+02	6.2E+01	1.4E+01
162	SALT-21	10/19/01 6:42 AM	10/20/01 6:26 AM	1424	23.7	3.56	3.82E+02	3.14E+02	6.96E+02	2.0E+02	4.3E+01
163	SALT-21C	10/19/01 6:51 AM	10/20/01 6:36 AM	1425	23.8	3.56	3.31E+02	2.55E+02	5.85E+02	1.6E+02	3.6E+01
164	CHUT-21	10/19/01 7:40 AM	10/20/01 7:31 AM	1431	23.9	INVALID	INVALID	INVALID	INVALID	INVALID	INVALID
165	CHUT-21C	10/19/01 7:47 AM	10/20/01 7:42 AM	1435	23.9	3.59	6.10E+02	4.99E+02	1.11E+03	3.1E+02	6.8E+01
166	LJET-21	10/19/01 8:35 AM	10/20/01 8:42 AM	1447	24.1	3.62	1.93E+02	1.55E+02	3.48E+02	9.6E+01	2.1E+01
167	LJET-21C	10/19/01 8:42 AM	10/20/01 9:04 AM	1462	24.4	3.65	1.92E+02	1.54E+02	3.47E+02	9.5E+01	2.1E+01
168	PMST-21	10/19/01 9:28 AM	10/20/01 9:51 AM	1463	24.4	3.66	3.57E+02	3.25E+02	6.82E+02	1.9E+02	4.1E+01
169	PMST-21C	10/19/01 9:35 AM	10/20/01 10:05 AM	1470	24.5	3.68	3.55E+02	3.10E+02	6.65E+02	1.8E+02	4.0E+01
170	MEST-21	10/19/01 10:09 AM	10/20/01 10:43 AM	1474	24.6	3.68	1.67E+03	1.38E+03	3.05E+03	8.3E+02	1.8E+02
171	MEST-21C	10/19/01 10:17 AM	10/20/01 10:54 AM	1477	24.6	3.69	1.67E+03	1.36E+03	3.03E+03	8.2E+02	1.8E+02
172	SEST-21	10/19/01 10:52 AM	10/20/01 11:41 AM	1489	24.8	3.72	1.00E+03	7.61E+02	1.76E+03	4.7E+02	1.0E+02
173	SEST-21C	10/19/01 11:00 AM	10/20/01 11:51 AM	1491	24.8	3.73	1.01E+03	7.73E+02	1.78E+03	4.8E+02	1.1E+02
174	SALT-22	10/20/01 6:30 AM	10/21/01 6:22 AM	1432	23.9	3.58	1.04E+02	7.35E+01	1.77E+02	4.9E+01	1.1E+01
175	CHUT-22	10/20/01 8:04 AM	10/21/01 7:42 AM	1418	23.6	INVALID	INVALID	INVALID	INVALID	INVALID	INVALID
176	LJET-22	10/20/01 8:59 AM	10/21/01 8:54 AM	1435	23.9	3.59	1.65E+02	1.22E+02	2.87E+02	8.0E+01	1.8E+01
177	PMST-22	10/20/01 10:00 AM	10/21/01 9:52 AM	1432	23.9	3.58	2.40E+02	1.78E+02	4.18E+02	1.2E+02	2.6E+01
178	MEST-22	10/20/01 11:09 AM	10/21/01 10:43 AM	1414	23.6	3.53	1.73E+02	1.26E+02	2.99E+02	8.5E+01	1.9E+01
179	SEST-22	10/20/01 11:59 AM	10/21/01 11:33 AM	1414	23.6	3.53	1.12E+02	8.48E+01	1.96E+02	5.6E+01	1.2E+01
180	SALT-23	10/21/01 6:32 AM	10/22/01 6:00 AM	1408	23.5	3.52	8.84E+01	6.33E+01	1.52E+02	4.3E+01	9.5E+00
181	CHUT-23	10/21/01 7:55 AM	10/22/01 7:22 AM	1407	23.4	3.52	1.23E+02	1.05E+02	2.29E+02	6.5E+01	1.4E+01
182	LJET-23	10/21/01 9:02 AM	10/22/01 8:29 AM	1407	23.5	3.52	1.86E+01	DET	DET	DET	DET
183	PMST-23	10/21/01 10:01 AM	10/22/01 9:26 AM	1405	23.4	3.51	3.33E+02	2.72E+02	6.05E+02	1.7E+02	3.8E+01
184	MEST-23	10/21/01 10:53 AM	10/22/01 10:12 AM	1399	23.3	3.50	5.30E+02	4.56E+02	9.87E+02	2.8E+02	6.2E+01
185	SEST-23	10/21/01 11:42 AM	10/22/01 10:58 AM	1396	23.3	3.49	1.40E+02	1.04E+02	2.45E+02	7.0E+01	1.5E+01

* = sample loss on extraction

** = cartridge wet

Table 1 1,3-Dichloropropene Ambient Monitoring Results (Cartridge) for Monterey and Santa Cruz Counties 2001

Log		Start	End	Time	Time	Volume	cis-1,3-DCP	trans-1,3-DCP	Total 1,3	3-Dichloropro	
#	Sample ID	Date/Time	Date/Time	(min)	(hours)	(m³)	(ng/sample)	(ng/sample)	(ng/sample)	(ng/m³)	⁽¹⁾ (pptv)
186	SALT-24TB	10/22/01 6:08 AM	NA	NA	NA	NA	<mdl< th=""><th><mdl< th=""><th><mdl< th=""><th>NA</th><th>NA</th></mdl<></th></mdl<></th></mdl<>	<mdl< th=""><th><mdl< th=""><th>NA</th><th>NA</th></mdl<></th></mdl<>	<mdl< th=""><th>NA</th><th>NA</th></mdl<>	NA	NA
187	SALT-24	10/22/01 6:16 AM	10/23/01 6:28 AM	1452	24.2	3.63	3.83E+03	2.84E+03	6.66E+03	1.8E+03	4.0E+02
188	CHUT-24	10/22/01 7:31 AM	10/23/01 7:19 AM	1428	23.8	3.57	2.97E+02	2.42E+02	5.39E+02	1.5E+02	3.3E+01
189	LJET-24	10/22/01 8:39 AM	10/23/01 8:05 AM	1406	23.4	3.51	8.56E+03	6.61E+03	1.52E+04	4.3E+03	9.5E+02
190	PMST-24	10/22/01 9:35 AM	10/23/01 8:48 AM	1393	23.2	3.48	6.53E+02	5.96E+02	1.25E+03	3.6E+02	7.9E+01
191	MEST-24	10/22/01 10:21 AM	10/23/01 9:24 AM	1383	23.1	3.46	1.17E+03	1.09E+03	2.26E+03	6.5E+02	1.4E+02
192	SEST-24	10/22/01 11:08 AM	10/23/01 10:09 AM	1381	23.0	3.45	2.06E+02	1.57E+02	3.63E+02	1.1E+02	2.3E+01
193	SALT-25	10/27/01 7:21 AM	10/28/01 7:08 AM	1427	23.8	3.57	7.57E+02	6.17E+02	1.37E+03	3.9E+02	8.5E+01
194	SALT-25C	10/27/01 7:28 AM	10/28/01 7:16 AM	1428	23.8	3.57	7.96E+02	6.49E+02	1.44E+03	4.0E+02	8.9E+01
195	CHUT-25	10/27/01 8:13 AM	10/28/01 8:12 AM	1439	24.0	3.60	8.55E+02	6.94E+02	1.55E+03	4.3E+02	9.5E+01
196	CHUT-25C	10/27/01 8:23 AM	10/28/01 8:25 AM	1442	24.0	3.60	8.96E+02	7.35E+02	1.63E+03	4.5E+02	1.0E+02
197	LJET-25	10/27/01 9:03 AM	10/28/01 9:07 AM	1444	24.1	3.61	1.18E+03	1.02E+03	2.20E+03	6.1E+02	1.3E+02
198	LJET-25C	10/27/01 9:10 AM	10/28/01 9:19 AM	1449	24.1	3.62	1.23E+03	1.07E+03	2.30E+03	6.4E+02	1.4E+02
199	PMST-25	10/27/01 10:01 AM	10/28/01 10:13 AM	1452	24.2	3.63	1.60E+02	1.64E+02	3.25E+02	8.9E+01	2.0E+01
200	PMST-25C	10/27/01 10:09 AM	10/28/01 10:06 AM	1437	23.9	3.59	1.64E+02	1.68E+02	3.32E+02	9.2E+01	2.0E+01
201	MEST-25	10/27/01 10:43 AM	10/28/01 11:03 AM	1460	24.3	3.65	4.96E+02	4.86E+02	9.82E+02	2.7E+02	5.9E+01
202	MEST-25C	10/27/01 10:49 AM	10/28/01 11:16 AM	1467	24.5	3.67	5.04E+02	4.96E+02	1.00E+03	2.7E+02	6.0E+01
203	SEST-25	10/27/01 11:31 AM	10/28/01 11:49 AM	1458	24.3	3.64	1.43E+02	1.32E+02	2.76E+02	7.6E+01	1.7E+01
204	SEST-25C	10/27/01 11:41 AM	10/28/01 12:01 PM	1460	24.3	3.65	1.43E+02	1.30E+02	2.73E+02	7.5E+01	1.6E+01
205	SALT-26TB	10/28/01 7:00 AM	NA	NA	NA	NA	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td>NA</td><td>NA</td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td>NA</td><td>NA</td></mdl<></td></mdl<>	<mdl< td=""><td>NA</td><td>NA</td></mdl<>	NA	NA
206	SALT-26TS	10/28/01 7:00 AM	NA	NA	NA	NA	1.03E+02	1.02E+02	DET	NA	NA
207	SALT-26FS	10/28/01 7:26 AM	10/29/01 7:15 AM	NA	NA	NA	1.05E+03	5.95E+02	1.59E+01	NA	NA
208	SALT-26	10/28/01 7:31 AM	10/29/01 7:24 AM	1433	23.9	3.58	9.48E+02	4.98E+02	1.45E+03	4.0E+02	8.9E+01
209	CHUT-26	10/28/01 8:18 AM	10/29/01 8:22 AM	1444	24.1	3.61	3.75E+02	3.33E+02	DET	DET	DET
210	LJET-26	10/28/01 9:13 AM	10/29/01 9:23 AM	1450	24.2	3.63	8.09E+02	5.33E+02	1.34E+03	3.7E+02	8.2E+01
211	PMST-26	10/28/01 10:19 AM	10/29/01 10:30 AM	1451	24.2	3.63	9.30E+01	9.99E+01	1.93E+02	5.3E+01	1.2E+01
212	MEST-26	10/28/01 11:09 AM	10/29/01 11:16 AM	1447	24.1	3.62	3.92E+02	4.28E+02	8.20E+02	2.3E+02	5.0E+01
213	SEST-26	10/28/01 11:55 AM	10/29/01 12:01 PM	1446	24.1	3.61	1.86E+02	1.87E+02	3.73E+02	1.0E+02	2.3E+01
214	SALT-27	10/29/01 7:31 AM	10/30/01 7:05 AM	1414	23.6	3.53	9.12E+02	6.72E+02	1.58E+03	4.5E+02	9.9E+01
215	CHUT-27	10/29/01 8:30 AM	10/30/01 8:06 AM	1416	23.6	3.54	2.71E+03	1.85E+03	4.56E+03	1.3E+03	2.8E+02
216	LJET-27	10/29/01 9:31 AM	10/30/01 9:08 AM	1417	23.6	3.54	1.15E+03	8.45E+02	1.99E+03	5.6E+02	1.2E+02
217	PMST-27**	10/29/01 10:35 AM	10/30/01 10:20 AM	1425	23.8	INVALID	INVALID	INVALID	INVALID	INVALID	INVALID
218	MEST-27	10/29/01 11:23 AM	10/30/01 11:14 AM	1431	23.8	3.58	5.08E+02	4.44E+02	9.51E+02	2.7E+02	5.9E+01
219	SEST-27	10/29/01 12:08 PM	10/30/01 12:02 PM	1434	23.9	3.58	1.76E+02	1.69E+02	3.44E+02	9.6E+01	2.1E+01
220	SALT-28	10/30/01 7:09 AM	10/31/01 7:07 AM	1438	24.0	3.59	7.59E+02	6.49E+02	1.41E+03	3.9E+02	8.6E+01
221	CHUT-28	10/30/01 8:10 AM	10/31/01 7:52 AM	1422	23.7	3.55	4.87E+03	4.05E+03	8.92E+03	2.5E+03	5.5E+02
222	LJET-28	10/30/01 9:13 AM	10/31/01 8:48 AM	1415	23.6	3.54	8.36E+02	7.55E+02	1.59E+03	4.5E+02	9.9E+01

* = sample loss on extraction

** = cartridge wet

INVALID - invalid due to unstable flow rate

Table 1 1,3-Dichloropropene Ambient Monitoring Results (Cartridge) for Monterey and Santa Cruz Counties 2001

Log		Start	End	Time	Time	Volume	cis-1,3-DCP	trans-1,3-DCP	Total 1,3	-Dichloropro	pene
#	Sample ID	Date/Time	Date/Time	(min)	(hours)	(m³)	(ng/sample)	(ng/sample)	(ng/sample)	(ng/m³)	⁽¹⁾ (pptv)
223	PMST-28	10/30/01 10:24 AM	10/31/01 9:41 AM	1397	23.3	3.49	2.45E+02	2.06E+02	4.51E+02	1.3E+02	2.8E+01
224	MEST-28	10/30/01 11:17 AM	10/31/01 10:33 AM	1396	23.3	3.49	7.55E+01	8.63E+01	1.62E+02	4.6E+01	1.0E+01
225	SEST-28	10/30/01 12:10 PM	10/31/01 11:15 AM	1385	23.1	3.46	4.77E+01	5.23E+01	1.00E+02	2.9E+01	6.4E+00
226	SALT-29	11/4/01 6:45 AM	11/5/01 6:43 AM	1438	24.0	3.60	1.04E+02	8.55E+01	1.89E+02	5.3E+01	1.2E+01
227	SALT-29C	11/4/01 6:45 AM	11/5/01 6:57 AM	1452	24.2	3.63	9.62E+01	7.78E+01	1.74E+02	4.8E+01	1.1E+01
228	CHUT-29	11/4/01 7:50 AM	11/5/01 8:03 AM	1453	24.2	3.63	2.48E+02	3.16E+02	5.64E+02	1.6E+02	3.4E+01
229	CHUT-29C	11/4/01 7:50 AM	11/5/01 8:19 AM	1469	24.5	3.67	2.51E+02	3.22E+02	5.73E+02	1.6E+02	3.4E+01
230	LJET-29	11/4/01 8:48 AM	11/5/01 9:02 AM	1454	24.2	3.63	2.10E+02	1.94E+02	4.04E+02	1.1E+02	2.5E+01
231	LJET-29C	11/4/01 8:48 AM	11/5/01 9:11 AM	1463	24.4	3.66	2.07E+02	1.88E+02	3.95E+02	1.1E+02	2.4E+01
232	PMST-29	11/4/01 9:44 AM	11/5/01 10:42 AM	1498	25.0	3.75	1.82E+02	1.61E+02	3.43E+02	9.2E+01	2.0E+01
233	PMST-29C	11/4/01 9:44 AM	11/5/01 10:33 AM	1489	24.8	3.72	1.70E+02	1.51E+02	3.21E+02	8.6E+01	1.9E+01
234	MEST-29	11/4/01 10:57 AM	11/5/01 11:54 AM	1497	24.9	3.74	1.75E+02	1.61E+02	3.37E+02	9.0E+01	2.0E+01
235	MEST-29C	11/4/01 10:57 AM	11/5/01 11:43 AM	1486	24.8	3.71	1.63E+02	1.48E+02	3.11E+02	8.4E+01	1.8E+01
236	SEST-29**	11/4/01 11:41 AM	11/5/01 12:37 PM	1496	24.9	3.74	2.13E+02	1.71E+02	3.84E+02	1.0E+02	2.3E+01
237	SEST-29C**	11/4/01 11:41 AM	11/5/01 12:40 PM	1499	25.0	3.75	2.16E+02	1.74E+02	3.91E+02	1.0E+02	2.3E+01
238	SALT-30	11/5/01 7:07 AM	11/6/01 6:33 AM	1406	23.4	3.52	5.89E+01	4.85E+01	1.07E+02	3.1E+01	6.7E+00
239	SALT-30TB	11/5/01 7:15 AM	NA	NA	NA	NA	<mdl< td=""><td><mdl< td=""><td><mdl_< td=""><td>NA</td><td>NA</td></mdl_<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl_< td=""><td>NA</td><td>NA</td></mdl_<></td></mdl<>	<mdl_< td=""><td>NA</td><td>NA</td></mdl_<>	NA	NA
240	CHUT-30	11/5/01 8:28 AM	11/6/01 7:41 AM	1393	23.2	3.48	4.35E+01	4.60E+01	8.96E+01	2.6E+01	5.7E+00
241	LJET-30	11/5/01 9:30 AM	11/6/01 8:41 AM	1391	23.2	3.48	2.15E+02	1.78E+02	3.92E+02	1.1E+02	2.5E+01
242	PMST-30	11/5/01 10:55 AM	11/6/01 9:58 AM	1383	23.1	3.46	2.43E+02	1.87E+02	4.31E+02	1.2E+02	2.7E+01
243	MEST-30	11/5/01 12:01 PM	11/6/01 11:20 AM	1399	23.3	3.50	1.88E+02	1.81E+02	3.69E+02	1.1E+02	2.3E+01
244	SEST-30	11/5/01 1:00 PM	11/6/01 12:18 PM	1398	23.3	3.49	1.52E+02	1.20E+02	2.72E+02	7.8E+01	1.7E+01
245	SALT-31	11/6/01 6:41 AM	11/7/01 6:19 AM	1418	23.6	3.55	7.11E+01	6.53E+01	1.36E+02	3.8E+01	8.5E+00
246	CHUT-31	11/6/01 7:51 AM	11/7/01 7:21 AM	1410	23.5	3.53	3.67E+01	3.75E+01	7.43E+01	2.1E+01	4.6E+00
247	LJET-31	11/6/01 8:48 AM	11/7/01 8:38 AM	1430	23.8	3.57	1.79E+02	1.65E+02	3.44E+02	9.6E+01	2.1E+01
248	PMST-31	11/6/01 10:02 AM	11/7/01 9:45 AM	1423	23.7	3.56	4.27E+02	2.92E+02	7.19E+02	2.0E+02	4.5E+01
249	MEST-31	11/6/01 11:35 AM	11/7/01 11:01 AM	1406	23.4	3.51	2.77E+02	2.26E+02	5.03E+02	1.4E+02	3.2E+01
250	SEST-31	11/6/01 12:26 PM	11/7/01 11:55 AM	1409	23.5	3.52	6.89E+02	4.23E+02	1.11E+03	3.2E+02	7.0E+01
251	SALT-32	11/7/01 6:26 AM	11/8/01 6:12 AM	1426	23.8	3.56	1.94E+02	1.28E+02	3.21E+02	9.0E+01	2.0E+01
252	CHUT-32	11/7/01 7:27 AM	11/8/01 7:00 AM	1413	23.5	3.53	1.23E+02	1.09E+02	2.32E+02	6.6E+01	1.4E+01
253	LJET-32	11/7/01 8:44 AM	11/8/01 7:48 AM	1384	23.1	3.46	2.93E+02	2.08E+02	5.01E+02	1.4E+02	3.2E+01
254	PMST-32	11/7/01 9:52 AM	11/8/01 9:54 AM	1442	24.0	3.60	4.49E+02	3.19E+02	7.68E+02	2.1E+02	4.7E+01
255	MEST-32	11/7/01 11:07 AM	11/8/01 10:09 AM	1382	23.0	3.46	2.59E+02	1.58E+02	4.18E+02	1.2E+02	2.7E+01
256	SEST-32	11/7/01 12:01 PM	11/8/01 11:03 AM	1382	23.0	3.45	6.05E+02	4.40E+02	1.04E+03	3.0E+02	6.7E+01

Table 2 Summary of Cartridge Results for 1,3-Dichloropropene (ng/m3) in Monterey and Santa Cruz Counties 2001

Sample						
Start Date	CHUT	LJET	MEST	PMST	SALT	SEST
9/8/2001	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>
9/9/2001	<mdl< td=""><td><mdl< td=""><td>6.21E+02</td><td>4.95E+01</td><td><mdl td="" ·<=""><td>4.43E+01</td></mdl></td></mdl<></td></mdl<>	<mdl< td=""><td>6.21E+02</td><td>4.95E+01</td><td><mdl td="" ·<=""><td>4.43E+01</td></mdl></td></mdl<>	6.21E+02	4.95E+01	<mdl td="" ·<=""><td>4.43E+01</td></mdl>	4.43E+01
9/10/2001	<mdl< td=""><td><mdl< td=""><td>1.44E+02</td><td>1.04E+02</td><td><mdl< td=""><td>DET</td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td>1.44E+02</td><td>1.04E+02</td><td><mdl< td=""><td>DET</td></mdl<></td></mdl<>	1.44E+02	1.04E+02	<mdl< td=""><td>DET</td></mdl<>	DET
9/11/2001	<mdl< td=""><td><mdl< td=""><td>6.68E+02</td><td>8.61E+01</td><td><mdl< td=""><td>1.58E+01</td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td>6.68E+02</td><td>8.61E+01</td><td><mdl< td=""><td>1.58E+01</td></mdl<></td></mdl<>	6.68E+02	8.61E+01	<mdl< td=""><td>1.58E+01</td></mdl<>	1.58E+01
9/17/2001	DET	DET	1.57E+02	1.51E+02	DET	1.26E+02
9/18/2001	DET	DET	1.64E+02	2.04E+02	DET	2.49E+02
9/22/2001	4.09E+01	3.02E+01	3.47E+02	1.36E+02	2.47E+01	6.54E+02
9/23/2001	2.57E+01	2.63E+01	2.05E+02	1.78E+02	1.22E+01	2.05E+02
9/24/2001	3.50E+02	4.01E+01	4.58E+03	9.23E+02	6.42E+02	1.22E+02
9/25/2001	9.36E+01	2.50E+02	7.50E+03	4.03E+03	4.38E+02	3.21E+02
9/26/2001	2.29E+02	9.04E+01	2.82E+03	7.43E+02	2.18E+02	5.42E+02
9/27/2001	1.36E+02	7.36E+02	2.63E+03	1.47E+03	1.14E+03	1.97E+02
10/3/2001	7.98E+01	1.14E+02	DET	<mdl< td=""><td>3.66E+01</td><td>1.35E+01</td></mdl<>	3.66E+01	1.35E+01
10/4/2001	1.71E+02	6.25E+01	1.92E+02	1.17E+02	DET	DET
10/5/2001	2.93E+02	4.30E+01	2.34E+02	1.67E+02	DET	1.30E+02
10/6/2001	1.93E+02	1.59E+02	1.15E+03	1.97E+02	9.78E+02	2.93E+01
10/11/2001	8.84E+01	1.25E+02	3.07E+02	4.01E+02	2.18E+02	6.84E+01
10/12/2001	1.53E+02	2.41E+02	1.21E+03	1.14E+03	3.95E+02	1.24E+02
10/13/2001	3.19E+02	2.08E+02	8.68E+02	5.34E+02	5.14E+02	8.36E+01
10/14/2001	1.61E+02	1.27E+02	1.32E+03	3.99E+02	2.07E+02	6.23E+01
10/20/2001	3.09E+02	9.63E+01	8.28E+02	1.86E+02	1.96E+02	4.79E+02
10/21/2001	INVALID	8.00E+01	8.46E+01	1.17E+02	4.95E+01	5.56E+01
10/22/2001	6.50E+01	DET	2.82E+02	1.72E+02	4.31E+01	7.01E+01
10/23/2001	1.51E+02	4.32E+03	6.54E+02	3.59E+02	1.84E+03	1.05E+02
10/27/2001	4.52E+02	6.36E+02	2.73E+02	9.24E+01	4.05E+02	1.48E+02
10/28/2001	DET	3.70E+02	2.27E+02	5.32E+01	4.03E+02	1.03E+02
10/29/2001	1.29E+03	5.63E+02	2.66E+02	INVALID	4.48E+02	9.61E+01
10/30/2001	2.51E+03	4.50E+02	4.64E+01	1.29E+02	3.92E+02	2.89E+01
11/4/2001	1.56E+02	1.11E+02	8.99E+01	9.17E+01	5.27E+01	1.98E+02
11/5/2001	2.57E+01	1.13E+02	1.05E+02	1.25E+02	3.06E+01	7.78E+01
11/6/2001	2.11E+01	9.63E+01	1.43E+02	2.02E+02	3.85E+01	3.16E+02
11/7/2001	6.58E+01	1.45E+02	1.21E+02	2.13E+02	9.01E+01	3.02E+02

Maximum	2.51E+03	4.32E+03	7.50E+03	4.03E+03	1.84E+03	6.54E+02
Average	2.4E+02	2.9E+02	8.8E+02	4.1E+02	2.8E+02	1.6E+02
# Samples	31	32	32	31	32	32
# > EQL	24	25	30	29	24	29
# DET	3	3	1	0	4	2
# < MDL	4	4	1	2	4	1

Only the higher value of each collocated pair was listed in the table.

<MDL results were factored in as MDL/2=0.42 ng/m³

DET results were factored in as (EQL+MDL)/2=2.5 ng/m³

Table 3 2001 Collocated Results for 1,3-Dichloropropene Cartridge Samples in Monterey and Santa Cruz Counties

Sample	Total 1,3	3-Dichlorop			
ID	ng/m3	Average	Rel. Diff.		
SALT-2	<mdl< td=""><td></td><td></td></mdl<>				
SALT-2C	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>		
CHUT-2	<mdl< td=""><td></td><td></td></mdl<>				
CHUT-2C	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>		
LJET-2	<mdl< td=""><td></td><td></td></mdl<>				
LJET-2C	<mdl< td=""><td><mdl< td=""><td><mdl< td=""></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""></mdl<></td></mdl<>	<mdl< td=""></mdl<>		
PMST-2	4.95E+01				
PMST-2C	1.72E+02	1.11E+02	111%		
MEST-2	6.21E+02				
MEST-2C	4.74E+02	5.47E+02	27%		
SEST-2	4.43E+01				
SEST-2C	3.68E+01	4.06E+01	19%		
SALT-6	DET				
SALT-6C	DET	DET	DET		
CHUT-6	DET				
CHUT-6C	DET	DET	DET		
LJET-6	DET				
LJET-6C	DET	DET	DET		
PMST-6	2.04E+02				
PMST-6C	1.98E+02	2.01E+02	3%		
MEST-6	1.64E+02				
MEST-6C	1.60E+02	1.62E+02	2%		
SEST-6	2.49E+02				
SEST-6C*	1.90E+02	2.20E+02	27%		
SALT-11	2.18E+02				
SALT-11C	1.94E+02	2.06E+02	12%		
CHUT-11	2.29E+02				
CHUT-11C	1.81E+02	2.05E+02	24%		
LJET-11	9.02E+01				
LJET-11C	9.04E+01	9.03E+01	0%		
PMST-11	7.43E+02				
PMST-11C	6.94E+02	7.19E+02	7%		
MEST-11	1.63E+03				
MEST-11C	2.82E+03	2.23E+03	54%		
SEST-11	5.42E+02				
SEST-11C	5.38E+02	5.40E+02	1%		
SALT-14	DET				
SALT-14C	DET	DET	DET		
CHUT-14	1.65E+02				
CHUT-14C	1.71E+02	1.68E+02	4%		
LJET-14	6.25E+01				
LJET-14C	6.10E+01	6.17E+01	2%		
PMST-14	1.10E+02				
PMST-14C	1.17E+02	1.14E+02	6%		
MEST-14	1.85E+02		46.		
MEST-14C	1.92E+02	1.88E+02	4%		
SEST-14	DET				
SEST-14C	DET	DET	DET		

Sample ID SALT-18 SALT-18C	ng/m3		ороло			
SALT-18		1,3-Dichloropropene Average Rel. Diff.				
	3.83E+02	71101490	TON BIII			
I CALLIAR	3.95E+02	3.89E+02	3%			
CHUT-18	DET	3.09L102	370			
CHUT-18C	1.53E+02	NA	NA			
LJET-18	2.23E+02		11/2			
LJET-18C	2.41E+02	2.32E+02	8%			
PMST-18	1.14E+03	2.02L102	0 70			
PMST-18C	9.09E+02	1.02E+03	22%			
MEST-18	1.21E+03	1.026100	22 /0			
MEST-18C	9.73E+02	1.09E+03	22%			
SEST-18	1.24E+02	1.032.100	22 /0			
SEST-18C	1.07E+02	1.16E+02	14%			
SALT-21	1.96E+02	1.10L+02	14 /6			
SALT-21C	1.64E+02	1 805±02	17%			
CHUT-21	INVALID	1.80E+02	1770			
CHUT-21C	3.09E+02	NA	NA			
LJET-21	9.63E+01	INA	19/3			
LJET-21C	9.48E+01	9.56E+01	2%			
PMST-21	1.86E+02	9.50L101	2.70			
PMST-21C	1.81E+02	1.84E+02	3%			
MEST-21	8.28E+02	1.041.702	3 /6			
MEST-21C	8.20E+02	8.24E+02	1%			
SEST-21	4.73E+02	0.246102	1 70			
SEST-21C	4.79E+02	4.76E+02	1%			
SALT-25	3.85E+02	4.70L+02	1 70			
SALT-25C	4.05E+02	3.95E+02	5%			
CHUT-25	4.31E+02	0.002.02	070			
CHUT-25C	4.52E+02	4.41E+02	5%			
LJET-25	6.10E+02	1.112.02	370			
LJET-25C	6.36E+02	6.23E+02	4%			
PMST-25	8.94E+01	0.202 - 02	170			
PMST-25C	9.24E+01	9.09E+01	3%			
MEST-25	2.69E+02	01002.01	0,0			
MEST-25C	2.73E+02	2.71E+02	1%			
SEST-25	7.57E+01		- · · · ·			
SEST-25C	7.48E+01	7.52E+01	1%			
SALT-29	5.27E+01					
SALT-29C	4.79E+01	5.03E+01	9%			
CHUT-29	1.55E+02					
CHUT-29C	1.56E+02	1.56E+02	0%			
LJET-29	1.11E+02					
LJET-29C	1.08E+02	1.10E+02	3%			
PMST-29	9.17E+01					
PMST-29C	8.63E+01	8.90E+01	6%			
MEST-29	8.99E+01		· · ·			
MEST-29C	8.38E+01	8.68E+01	7%			
SEST-29**	1.03E+02					
SEST-29C**	1.04E+02	1.03E+02	2%			
		Average =	12%			

Table 4. Total 1,3-Dichloropropene (Cartridge) Lab Spike Results

	cis-1,3-Dichloropropene			trans-1,3-Dichloropropene			
Sample ID	Expected (ng/sample)	Actual (ng/sample)	Percent Recovery	Expected (ng/sample)	Actual (ng/sample)	Percent Recovery	
Spike1	120	74.2	62%	120	76.05	63%	
Spike 2	120	91.4	76%	120	91.02	76%	
Spike 3	120	97.0	81%	120	97.71	81%	
Spike 4	120	86.8	72%	120	87.66	73%	
Spike 5	120	87.2	73%	120	87.12	73%	
Spike 6	120	94.6	79%	120	95.46	80%	
Spike 7	120	89.2	74%	120	88.14	73%	
Spike 8	120	87.2	73%	120	85.23	71%	
		Ave.=	74%		Ave.=	74%	

Table 5. Total 1,3-Dichloropropene (Cartridge) Trip Spike Results

	cis-1,3-Dichloropropene			trans-1,3-Dichloropropene			
Sample ID	Expected (ng/sample)	Actual (ng/sample)	Percent Recovery	Expected (ng/sample)	Actual (ng/sample)	Percent Recovery	
SEST-1TS	120.0	75.4	63%	120.0	78.7	66%	
SALT-10TS	120.0	101.4	85%	120.0	101.8	85%	
SALT-17TS	120.0	91.0	76%	120.0	91.0	76%	
SALT-26TS	120.0	103.3	86%	120.0	102.1	85%	
		Ave.=	77%		Ave.=	78%	

Table 6. Total 1,3-Dichloropropene (Cartridge) Field Spike Results

	cis-1,3-Dichloropropene			trans-1,3-Dichloropropene		
Sample ID	Expected (ng/sample)	Actual (ng/sample)*	Percent Recovery	Expected (ng/sample)	Actual (ng/sample)*	Percent Recovery
SALT-1FS	120.0	71.3	59%	120.0	91.14	76%
SALT-10FS	120.0	99.6	83%	120.0	147	123%
SALT-17FS	120.0	88.7	74%	120.0	79.2	66%
SALT-26FS	120.0	106.8	89%	120.0	97.5	81%
		Ave.=	76%		Ave.=	86%

^{*}Corrected by subtracting the concentration found in the corresponding collocated sample.